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**TRANSMITTAL LETTER**  
**(General - Patent Pending)**

Docket No.  
00-055

In Re Application Of: **WALKER et al.**

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
09/609,017	June 30, 2000	Igor Borissov	22927	3629	2125

Title: **METHODS AND APPARATUS FOR INCREASING, MONITORING AND/OR REWARDING A PARTY'S COMPLIANCE WITH A SCHEDULE FOR TAKING MEDICINES**

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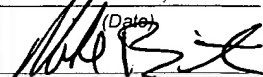
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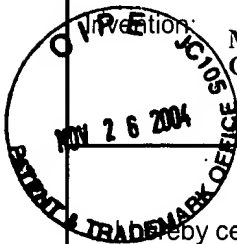
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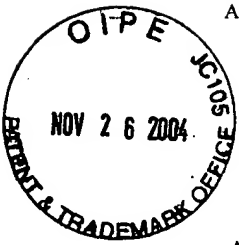
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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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Geoffrey M. Gelman, ) Examiner: BORISSOV, Igor N.  
Russell Pratt Sammon, and )  
Andrew P. Golden ) **REPLY BRIEF**  
)  
Application No.: 09/609,017 ) Attorney Docket No. 00-055  
)  
Filed: June 30, 2000 )  
)  
For: METHODS AND APPARATUS )  
FOR INCREASING, )  
MONITORING AND/OR )  
REWARDING A PARTY'S )  
COMPLIANCE WITH A )  
SCHEDULE FOR TAKING )  
MEDICINES )

**BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Commissioner for Patents  
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Dear Sir:

Appellants hereby reply to the Examiner's Answer mailed September 22,  
2004.

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## **NO RELATED APPEALS AND INTERFERENCES ARE KNOWN**

No related interferences or appeals contemplated by former Rule 192(c)(2) or present Board Rule 37(c)(1)(ii) are known.

The Examiner states that the Appeal Brief (mailed June 14, 2004) “does not contain a statement identifying the related appeals and interferences....”

[Examiner’s Answer, page 2].

The Examiner is incorrect. In the Appeal Brief, under the heading “RELATED APPEALS AND INTERFERENCES,” Appellants clearly stated:

Appellants, Appellants’ legal representative and Appellants’ assignee know of no interferences or appeals that will directly affect, be directly affected by, or have a bearing on the Board’s decision in the pending appeal.

[page 11 (emphasis added)].

## **UPDATED GROUNDS FOR REJECTION**

Appellants gratefully acknowledge that the § 112 (P2) rejections of Claims **26-29 and 36-38** have been withdrawn. [Examiner’s Answer, page 3].

The following table illustrates an updated summary of the statutory bases and the cited references for the Examiner’s rejections for each pending claim, as best understood by Appellants. The claim sets indicated in the table do not reflect the grouping of claims for the separate arguments of patentability submitted by Appellants in the Appeal Brief.

			§ 103			
Claims	§ 101	§ 112(P2)	Reber & Andrews	Reber, Andrews & Brown (RAB)	RAB & Bro	RAB & Daansen
26, 27			X			
28, 29, 36-38				X		
3-14, 39-42	X	X	X			
34, 35, 43-44, 46-48, 51	X	X		X		
45	X	X			X	
49	X	X				X
50	X	X				X plus unsupported assertion as to what is “old and well known”



## REBUTTAL OF EXAMINER'S ANSWER

Appellants specifically rebut the following assertions provided for the first time in the Examiner's Answer.

This Reply Brief augments but does not replace the arguments for patentability made in the Appeal Brief.

Some arguments provided in the Appeal Brief are referred to for convenience.

### 1. Claim Rejections under § 112 (P2)

The proper legal standard for indefiniteness under § 112(P2) is provided in the Appeal Brief at pages 36-38.

#### 1.1. Summary of Appellants' Arguments

The Examiner still has failed to make a *prima facie* case of indefiniteness of any claim:

- Contrary to law, the Examiner continues to rely on the alleged breadth of various terms as the basis for rejecting claims under § 112(P2). Breadth is not to be equated with indefiniteness. In re Miller. The Examiner has never even attempted to refute this argument.
- Contrary to law, the Examiner imposes a legally baseless standard that method steps must recite particular means or "technology" in order to be definite. Again, breadth is not to be equated with indefiniteness.

- Contrary to law, the Examiner imposes a legally baseless *per se* requirement that any two method steps must somehow explicitly be “related.”
- Contrary to law, the Examiner continues to rely on an alleged lack of description or detail in various claims as a basis for rejection under § 112(P2). There is no requirement under § 112(P2) that a claim must be a self-contained explanation of every step. That is not the role of claims. S3 Inc. v. nVIDIA Corp.
- The Examiner has never made any finding as to the level of ordinary skill in the art. Accordingly, the Examiner cannot support any finding that one of ordinary skill in the art would have found any claim language unreasonably unclear.

**1.2. The Examiner’s novel requirements to recite (i) “signal-producing” means, (ii) “signal-receiving” means, and / or (iii) “to what field of technology said method step belongs,” are improper *per se* standards for indefiniteness—Breadth is not indefiniteness**

Specifically with respect to Claims 3 and 7-11 (GROUP I), the Examiner asserts:

Furthermore, neither signal-producing means, no signal-receiving means are indicated, therefore it is not clear to what field of technology said method step belongs, and, accordingly, what type of signal is received, and how exactly said *receiving* step is implemented.

[Examiner’s Answer, page 24 (emphasis in original)].

The Examiner makes a similar statement with respect to Claims **34 and 35** (GROUP IV). [Examiner's Answer, page 31].

The Examiner makes a similar statement regarding a lack of “signal-receiving means” with respect to Claims **39-42** (GROUP VII). [Examiner's Answer, page 36].

The Examiner makes a similar statement regarding a lack of “information obtaining means” with respect to Claim **51** (GROUP XII). [Examiner's Answer, page 45].

The Examiner appears to be applying one or more novel *per se* standards for indefiniteness. These standards are legally baseless and have nothing to do with § 112(P2) or the reasonable clarity of any recited language to one having ordinary skill in the art. The Examiner has not provided any legal basis suggesting that failure to recite explicitly any particular means for performing any step in a method claim would *per se* make a claim unclear to one having ordinary skill in the art.

As discussed herein and in the Appeal Brief, even if *signal*, *receiving*, *information* and / or *obtaining* may be broad in scope, breadth is not *per se* indefiniteness. In re Miller.

The Examiner has never even attempted to refute Appellants' argument that breadth cannot be equated with indefiniteness.

The Examiner has not provided any legal basis for rejecting a claim as indefinite due to an asserted failure to make it “clear to what field of technology said method step belongs.” Appellants are unaware of any statutory or other legal authority requiring any particular method step to be tied to a particular “field of

technology.” Again, the Examiner simply appears to be applying a baseless *per se* rule requiring Appellants to recite particular means to perform a given method step. The failure to do so has nothing to do with the reasonable clarity of *receiving a signal, receiving information, or obtaining information* to one having ordinary skill in the art. As discussed herein, although such steps may be relatively broad in scope, breadth is not to be equated with indefiniteness.

Accordingly, the Examiner’s new assertions have nothing to do with indefiniteness and do not comprise substantial evidence of indefiniteness of any claim. The Examiner has not performed the required analysis supported by substantial evidence—no *prima facie* case of indefiniteness has been made. To the extent the Examiner is relying on an improper *per se* standard for rejecting any of Claims **3 and 7-11** (GROUP I), Claims **34 and 35** (GROUP IV), Claims **39-42** (GROUP VII), and Claim **51** (GROUP XII) under § 112(P2), such rejections cannot stand.

#### Claims 4-6 (GROUP II)

With respect to Claims **4-6** (GROUP II), Appellants note that Claim **4** recites *receiving the signal from a device that monitors at least an indicator of whether the first container and the second container are positioned so as to wirelessly communicate*.

Thus, Claim **4** clearly indicates an example of a device from which a signal may be received. To the extent the Examiner’s § 112(P2) rejection of Claims **4-6** is based on Appellants’ failure to indicate such a device, the § 112(P2) rejection of Claims **4-6** (GROUP II) cannot stand.

### 1.3. signal is not indefinite

The arguments provided in this section are equally applicable to any claim reciting a *signal* (or depending from a claim that recites a *signal*) that the Examiner has rejected as being indefinite under § 112(P2), including the following groups of claims:

GROUP I: Claims **3 and 7-11**

GROUP II: Claims **4-6**

GROUP III: Claims **12-14**

GROUP IV: Claims **39-42**

Each of independent Claim 3 (GROUP I) and independent Claim 39 (GROUP IV) recites a feature generally directed to *receiving a signal*. The definiteness of this language and the failure of the Examiner to establish a *prima facie* case of indefiniteness are discussed in the Appeal Brief, at least on pages 39-43.

#### 1.3.1. Examiner's enumerated examples of *signal* undermine indefiniteness arguments

The Examiner now embellishes his assertion with respect to the indefiniteness of *signal* by enumerating more than six examples of what the Examiner believes *signal* could encompass: “It is not clear what does the term ‘signal’ encompass: sound, color, physical action, voltage or current value, or combination thereof.” [Examiner's Answer, page 4]. The enumerated list provides for more than six examples given the various implied “combinations thereof.”

Appellants also note that the Examiner believes (as indicated by the obviousness rejections of independent Claims **3 and 39**) that Robert and / or Andrews provide an example of *receiving a signal*.

The Examiner has thus undermined his assertion that *signal* is unreasonably unclear to one having ordinary skill in the art. The Examiner's statements echo those rejected by the Court of Customs and Patent Appeals (CCPA) in In re Robins, 166 U.S.P.Q. 552, 429 F.2d 452 (C.C.P.A. 1970). In that case, the examiner argued that "it is impossible to ascertain with any degree of reliability what compounds appellant intends to include within the meaning of the language presently appearing in the claims." That examiner went on to state that any organic radical could be included, and cited four patents to "show various radicals...which the terms used in the claims would encompass in the absence of special meanings." In response, the CCPA stated:

This ability of the examiner to enumerate radicals encompassed by the claim language points up, we think, the weakness of the indefiniteness argument. Giving the language its broadest possible meaning, as we are bound to do in the absence of special definitions by appellant, the breadth of the claims insofar as the catalyst is concerned is indeed immense. However, "Breadth is not indefiniteness."

166 U.S.P.Q. 552, 429 F.2d 452 at 458 (citations omitted, emphasis added).

Similarly, in providing a list of more than six examples and indicating portions of the Reber and / or Andrews patents that the present Examiner believes may be encompassed by *signal*, the Examiner fatally weakens any argument that the meaning of *signal* is "confusing," "not clear," or "not descriptive."

In fact, the ability of the Examiner to list numerous examples indicates that the Examiner has made a determination as to what the term *signal* reasonably means to one having ordinary skill in the art—that is the epitome of definiteness. Even if the scope encompassed is broad (or even “immense”), the Examiner has never provided any evidence suggesting that one of ordinary skill in the art would find *signal* to be confusing or unreasonably unclear. The Examiner has done nothing more than assert that *signal* is broad enough to encompass the recited examples. However, “Breadth is not indefiniteness.”

The Examiner has never even attempted to respond to Appellants’ argument that breadth cannot be equated with indefiniteness.

*Signal* does not render any claim indefinite. The Examiner has failed to establish a *prima facie* case of indefiniteness of any claim based on *signal* or *receiving a signal*. To the contrary, the Examiner appears to have adopted a particular and distinct interpretation of *signal* that enabled him to list numerous examples the Examiner believes would be encompassed by that interpretation. Appellants need not agree or disagree with this interpretation—the Examiner simply has failed to provide any evidence that *signal* is unclear, and in addition he has undermined his own basis for rejection by providing examples for *signal*.

**1.3.2. Examiner’s assertion that *signal* is “not clear” is inconsistent**

The Examiner now has withdrawn the § 112(P2) rejections for Claims **26** (GROUP XIII) and **27** (GROUP XIV). [Examiner’s Answer, page 3]. Each of

Claims **26 and 27** recites a feature of a *signal*. No further detail is recited in Claims **26 and 27** with respect to any particular type of *signal*.

The Examiner thus asserts that *signal* is “not clear” with respect to independent Claims **3 and 39** (see Examiner’s Answer, pages, 4, 24, and 36), but also (as necessarily implied by his withdrawing of the § 112(P2) rejection) finds that *signal* is reasonably clear when recited in Claims **26 and 27**.

The Examiner’s inconsistent treatment of *signal* appears arbitrary. The Examiner’s conclusions with respect to the definiteness of *signal* vary, without any explanation, from claim to claim. The Examiner finds that Claims **26 and 27** are definite (despite their use of *signal*) yet inconsistently also finds with respect to Claims **3 and 39** that “[i]t is not clear what does the term ‘signal’ encompass: sound, color, physical action, voltage or current value, or combination thereof.”

**1.4. The Examiner’s novel requirement “to show how the steps are related with each other” is an improper *per se* standard**

Specifically with respect to:

GROUP I: Claims **3 and 7-11** [Examiner’s Answer, page 24];

GROUP IV: Claims **34 and 35** [pages 4, 30-31];

GROUP VII: Claims **39-42** [page 36]; and

GROUP XII: Claim **51** [pages 44-45]

the Examiner now asserts that Appellants have failed “to show how the steps are related with each other.” The Examiner appears to be rejecting the above claims (and any dependent claims) based at least in part on this novel *per se* rule for indefiniteness (hereinafter the “Examiner’s *per se* Related Steps Standard”).



The Examiner has never offered any evidence as to why the asserted failure to “relate” two method steps would *per se* render any claim unreasonably unclear under § 112(P2).

The asserted failure has nothing to do with the clarity of the claim language, and certainly has nothing to do with indefiniteness under § 112(P2).

The Examiner’s *per se* Related Steps Standard is clearly without legal basis. The Examiner has provided no legal support or even rationale for the assertion that failure to “relate” any method steps renders any method claim insufficiently clear to one having ordinary skill in the art.

As indicated in the Appeal Brief, there is no requirement that a “relationship” must be established between method steps for a claim to be definite. [See, e.g., Appeal Brief, pages 85-87]. Appellants understand that an apparatus claim, for example, might be rejected as indefinite if (i) there is no claimed relationship between claimed elements of the apparatus and (ii) the cooperative relationship of the elements is essential. However, there is no parallel basis for rejecting a method claim known to Appellants, and the Examiner has never provided any legal justification for such a standard. Accordingly, Appellants maintain that there is no basis for the Examiner to reject any method *per se* based on an asserted failure to recite how method steps are related.

Even assuming the Examiner’s *per se* Related Steps Standard had a proper legal basis, Appellants further do not understand the Examiner’s assertion that how method steps are related is “not clear.”

GROUP I: With respect to independent Claim 3 (GROUP I) a relationship is apparent between the *signal* received in one step and the *determining* in another step. Specifically, the *determining* explicitly is *based on the signal received*.

Accordingly, the Examiner does not even seem to have properly applied his own improper *per se* Related Steps Standard. To the extent the Examiner is relying upon an asserted lack of relationship, the § 112(P2) rejection of GROUP I cannot stand.

GROUP IV: Similarly, with respect to Claim 34 (GROUP IV), a relationship is apparent between the *information* received in one step and the *determining of a level of compliance* in another step. Specifically, the *determining* explicitly is *based on the information received*. To the extent the Examiner is relying upon an asserted lack of relationship, the § 112(P2) rejection of GROUP IV cannot stand.

GROUP VII: Contrary to the Examiner's assertion, the second method step of Claim 39 (GROUP VII) clearly is related to the first method step at least because the *determining if at least one party has complied with a schedule* in the second method step is explicitly *based at least in part on the signal* received in the first method step. To the extent the Examiner is relying upon an asserted lack of relationship, the § 112(P2) rejection of GROUP VII cannot stand.

GROUP XII: Contrary to the Examiner's assertion, the second method step of Claim 51 (GROUP XII) clearly is related to the first method step at least because the *rewarding a party* in the second method step is explicitly *based on the information* obtained in the first method step. To the extent the Examiner is

relying upon an asserted lack of relationship, the § 112(P2) rejection of GROUP XII cannot stand.

**1.5. GROUP IV (Claims 34 and 35): *determining a level to which a party complied with a medicine schedule based on information regarding whether at least one first container for storing a first medicine was able to communicate with at least one second container for storing a second medicine is not indefinite***

With respect to Claims **34 and 35** (GROUP IV), the Examiner now asserts:

For example, the relationship between the step of: *receiving information regarding whether at least one first container for storing a first medicine was able to communicate with at least one second container for storing a second medicine during a pre-determined time period*; and the step of: *determining a level to which the party complied with a medicine schedule based on the information*, is not clear. Specifically, it is not clear how [sic] ability of containers to communicate with each other relate [sic] to the level of compliance with a medicine schedule.

[Examiner's Answer, page 31]. The Examiner also now asserts:

The method step “determining a level to which a party complied with a medicine schedule based on the information is confusing, because it is not indicated if the party took this medicine. Specifically, it is not clear how the first method step of “receiving information about weather [sic] said first container was able to communicate with said second container” is relating to the second method step of: “determining a level to which the party complied with a medicine schedule”.

[Examiner's Answer, page 4].

### **1.5.1. The Examiner ignores the plain claim language and the Specification**

Appellants note that the Examiner continues to maintain a belief (contrary to what is clearly disclosed in the Specification) that compliance with a medicine schedule can only be determined if it is determined if “the party took this medicine.” The Examiner does not provide any evidence to support this interpretation of Appellants’ claims, much less any evidence that one skilled in the art would interpret Appellants’ claims as requiring determining if “the party took this medicine.”

By maintaining this belief, it is clear that the Examiner has chosen to ignore the plain claim language and the Specification. As clearly recited in the claims and disclosed in the Specification, according to various embodiments of the present invention, a level to which a party complied with a medicine schedule can be determined based on information about whether a first container was able to communicate with a second container. [See, *e.g.*, Appeal Brief, pages 77-78, 85-87]. For reasons unexplained, the Examiner appears unwilling to accept the plain language and, contrary to law, is unwilling to consider the illustrative examples provided in the disclosure. Solomon v. Kimberly-Clark Corp. Accordingly, the Examiner cannot have established a *prima facie* case of indefiniteness with respect to Claims **34 and 35**.

**1.5.2. The Examiner impermissibly requires the claims to fulfill the role of the disclosure**

It is Appellants' understanding that the Examiner simply believes that the method claims must recite more explicit detail as to how the recited *determining* steps are performed—the Examiner, for reasons unexplained, wants to be able to read a more detailed example in the claim. However, the scope of what Claim 34 is meant to encompass is reasonably clear: Claim 34 clearly and particularly recites that a level to which a party complied with a medicine schedule is determined based on information regarding whether at least one first container was able to communicate with at least one second container during a pre-determined time period. The claim does not have to explain how such a determination might be accomplished to be definite—that is the role of the disclosure (which the Examiner refuses to consider), not the claims. See, Warmerdam; Orthokinetics; S3 v. nVidia. It is impermissible for the Examiner to require such detail in claims that are reasonably clear in scope.

**1.5.3. Examiner's assertion that "how ability of containers to communicate with each other relate [sic] to the level of compliance with a medicine schedule" is "not clear" is inconsistent**

The Examiner now has withdrawn the § 112(P2) rejection for Claims 36 and 37 (GROUP V). [Examiner's Answer, page 3]. Independent Claim 36 recites features generally directed to *determining a level to which a party complied with a medicine schedule based on information regarding whether at*

*least one first container for storing a first medicine was able to communicate with at least one second container for storing a second medicine.*

The Examiner thus asserts that such *determining* is “not clear” with respect to independent Claim **34**, but also (as necessarily implied by his withdrawing of the § 112(P2) rejection) finds that substantially the same functionality is reasonably clear when recited in Claim **36**.

The Examiner’s contradictory treatment of the same language is inconsistent. The Examiner’s conclusions with respect to the definiteness of *determining* vary, without any explanation, from claim to claim. The Examiner finds that Claim **36** is definite (despite its reciting of *determining*) yet inconsistently also finds with respect to Claim **34** that “it is not clear how ability of containers to communicate with each other relate [sic] to the level of compliance with a medicine schedule.”

Thus, the Examiner still has failed to establish any evidence in support of the § 112(P2) rejection of Claims **34 and 35** (GROUP IV). No *prima facie* case of indefiniteness has been made.

**1.6. GROUP XII (Claim 51): *rewarding a party based on information that identifies whether at least one first container for storing a first medicine was able to communicate with at least one second container for storing a second medicine is not indefinite***

With respect to Claim 51 (GROUP XII), the Examiner now asserts:

For example, the relationship between the step of: *obtaining information regarding [sic—that identifies] whether at least one first container for storing a first medicine was able to communicate with at least one second container for storing a second medicine during a pre-determined time period*; and the step of: *rewarding the party based on the information*, is not clear. Specifically, it is not clear how [sic] ability of containers to communicate with each other relate [sic] to rewarding a party.

[Examiner's Answer, page 45].

**1.6.1. The Examiner ignores the Specification**

The Examiner asserts that it is not clear from Claim 51 how rewarding relates to “ability of containers to communicate with each other.” As discussed below, Claim 51 need not recite how rewarding may be performed.

Appellants submit that the language of Claim 51 is reasonably clear on its face to one of ordinary skill in the art, and certainly when considered (as required) in light of the Specification. As clearly recited in the claims and disclosed in the Specification, according to various embodiments of the present invention, a party can be rewarded based on information regarding whether a first container was able to communicate with a second container. [See, e.g., Specification, page 22, lines 4-13].

For reasons unexplained, however, the Examiner appears unwilling to consider the illustrative examples provided in the disclosure, as is required. Solomon v. Kimberly-Clark Corp. Accordingly, the Examiner cannot have established a *prima facie* case of indefiniteness with respect to Claim 51.

**1.6.2. The Examiner impermissibly requires the claims to fulfill the role of the disclosure**

It is Appellants' understanding that the Examiner simply believes that the method claims must recite more explicit detail as to how the recited *rewarding* step is performed—the Examiner, for reasons unexplained, wants to be able to read a more detailed example in the claim. However, the scope of what Claim 51 is meant to encompass is reasonably clear: Claim 51 clearly and particularly recites that a party is rewarded based on information that identifies whether at least one first container was able to communicate with at least one second container during a pre-determined time period. The claim does not have to explain how such rewarding might be accomplished to be definite—that is the role of the disclosure (which the Examiner refuses to consider), not the claims. See, e.g., Warmerdam; Orthokinetics; S3 v. nVidia. It is impermissible for the Examiner to require such detail in a claim that is reasonably clear in scope.



**1.6.3. Examiner's assertion that "how ability of containers to communicate with each other relate [sic] to rewarding a party" is "not clear" is inconsistent**

The Examiner now has withdrawn the § 112(P2) rejection for Claim 38 (GROUP VI). [Examiner's Answer, page 3]. Claim 38 recites features generally directed to *rewarding a party based on information that identifies whether at least one first container for storing a first medicine was able to communicate with at least one second container for storing a second medicine during a pre-determined time period*.

The Examiner thus asserts that such a feature is "not clear" with respect to independent Claim 51, but also (as necessarily implied by his withdrawing of the § 112(P2) rejection) finds that such a feature is reasonably clear when recited in Claim 38.

The Examiner's contradictory treatment of *rewarding* is inconsistent. The Examiner's conclusions with respect to the definiteness of *rewarding* vary, without any explanation, from claim to claim. The Examiner finds that Claim 38 is definite (despite its reciting of *rewarding*) yet inconsistently also finds with respect to Claim 51 that "it is not clear how ability of containers to communicate with each other relate to rewarding a party."

Thus, the Examiner still has failed to establish any evidence in support of the § 112(P2) rejection of Claim 51 (GROUP XII). No *prima facie* case of indefiniteness has been made.

### 1.7. “continuity of the method in time”

Specifically with respect to Claims **3 and 7-11** (GROUP I) and Claims **39-42** (GROUP VII), the Examiner asserts for the first time:

Furthermore, the first method step (*receiving a signal*) indicates that the method step is conducted in the present tense, while the second method step indicates action taken in the **past tense (was positioned)**. It is not clear how the continuity of the method in time is preserved.

[Examiner’s Answer, pages 25, 36 (emphasis in original)].

The Examiner makes a similar statement with respect to Claim **34** (GROUP IV), which recites a step of receiving information and in a determining step includes the phrase “*was able to communicate.*” [Examiner’s Answer, page 31 (emphasis in original)].

The Examiner makes a similar statement with respect to Claim **51** (GROUP XII), which recites a step of *obtaining information* and in a *determining* step includes the phrase “*was able to communicate.*” [Examiner’s Answer, page 45 (emphasis in original)].

Appellants do not understand these purported bases for rejection.

Appellants respectfully note that each step of the method claims is recited (conventionally) using a gerund form of a verb (i.e., a verbal noun ending in “-ing”). It seems to Appellants to be an unhelpful truism to state, as the Examiner effectively has done, that a method step is performed at the time it is performed (and not at some other time). Nonetheless, Appellants accept the Examiner’s characterization (i.e., “conducted in the present tense”) for the sake of argument below.

To the extent that the Examiner is correct and *receiving a signal* or *obtaining information* is “conducted in the present tense,” the Examiner must concede that the step of *determining* is also “conducted in the present tense.” Accordingly, there does not appear to be any dispute as to the “continuity of the method in time”—each step is performed at the time it is performed.

What appears to be causing the Examiner’s concern is that, for example with respect to Claim 3, in the step of *determining whether a first container...was positioned so as to wirelessly communicate with a second container...*, the phrase *was positioned* is stated in the past tense.

Of course, Appellants again note that the step of *determining* itself is “present tense,” according to the Examiner’s characterization. The claim thus merely requires a determination (whenever it may be performed) as to whether something was true in the past (i.e., were the containers positioned so as to communicate wirelessly?). Accordingly, Appellants do not believe that the language of any *determining* step that refers to whether a condition was met would be unclear or confusing to one having ordinary skill in the art.

Thus, the Examiner has failed to establish a *prima facie* case of indefiniteness for any claim due to an asserted lack of “continuity of the method in time.” To the extent the Examiner is relying upon such an assertion in rejecting any of the claims of GROUPs I (Claims 3 and 7-11), IV (Claims 34 and 35), VII (Claims 39-42) or XII (Claim 51) under § 112(P2), such rejections cannot stand.

Appellants note that unless explicitly stated in a claim, nothing in any claim or in the discussion herein is to be interpreted as suggesting that any step is

to be performed in a particular sequence relative to any other step of the method. Appellants also briefly note that the recited *containers* may or may not be positioned so as to communicate as of the time the determination is made (it is immaterial); the determination is as to whether they were so positioned.

**1.8. The Examiner's *per se* rejection of all dependent claims for indefiniteness is improper**

The Examiner continues to make reference to an unsupported belief that if a claim depends from a claim that is rejected for indefiniteness, that dependent claim must be indefinite *per se*.

For example, the Examiner asserts on pages 28-29 of the Examiner's Answer that Claims **12-14** (GROUP III) are rejected solely because "claims 12-14 depend on claim 3" and therefore the reasons for rejecting independent Claim 3 "are equally applicable to claims 12-14." In other words, the Examiner is not asserting that the arguments applied to Claim 3 are equally applicable to Claims **12-14** because of the language recited in Claims **12-14**, considered as a whole, but solely because of the mere dependence of those claims from a rejected claim.

Contrary to the Examiner's *per se* rejection of all dependent claims, the scope and language of each claim must be evaluated individually for compliance with all statutory requirements, taking into account all of the respective limitations and claimed subject matter as a whole.

The Examiner's only evidence in support of a rejection of any dependent claim is its dependence on an independent claim the Examiner has found to be indefinite.

Thus, the Examiner has failed even to consider whether any dependent claim might clarify any language that the Examiner finds “confusing” or otherwise objectionable in its base independent claim.

Accordingly, to the extent that the Examiner has failed to consider properly the claimed subject matter and language of any dependent claims for compliance with § 112(P2), the Examiner’s *per se* rejection of all dependent claims for indefiniteness is contrary to law.

Thus, the Examiner has failed to establish a *prima facie* case of indefiniteness for any claims of:

GROUP II: dependent Claims **4-6**;  
GROUP III: dependent Claims **12-14**;  
GROUP VIII: dependent Claims **43-47**;  
GROUP IX: dependent Claim **48**;  
GROUP X: dependent Claim **49**; and  
GROUP XI: dependent Claim **50**.

**1.9. Asserted failure to recite “steps of taking medicine” does not render any claim indefinite**

With respect to Claims **34 and 35**, the Examiner now asserts:

Furthermore, without reciting steps of taking medicine, it is not clear how exactly said *level of compliance* [sic] can be determined.

[Examiner’s Answer, page 31 (emphasis in original)].

**1.10. No limitations need be “read into the claims” to render any disputed language definite under § 112(P2)**

In the Appeal Brief, Appellants noted that it appeared the Examiner had never considered the Specification in making any § 112(P2) rejections.

Appellants pointed out that the Examiner is required by law to consider the Specification. [See, e.g., page 40].

In response, the Examiner emphasizes his misunderstanding of indefiniteness rejections, which the Examiner clearly believes may be based solely on the purported breadth of what is claimed:

In response to the applicant’s [sic] argument that the Specification explains how the step of *determining a level to which the party complied with a medicine schedule based on the information* [sic—is performed?], the Examiner points out that claims define the invention, not [sic] Specification. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 U.S.P.Q.2d (Fed. Cir. 1993).

[Examiner’s Answer, page 31 (emphasis in original)]. Thus, the Examiner incorrectly presumes that Appellants were seeking to limit the claims in order to make them definite.

The Examiner does not understand that an indefiniteness analysis must be focused, not on the relative narrowness or breadth of scope, but on the reasonable clarity of scope (regardless of whether that scope is narrow or broad) to one having ordinary skill in the art, consistent with the disclosure. Solomon v. Kimberly-Clark Corp.

Appellants have never even implied that it is necessary to import limitations from the Specification to render any claim definite under § 112(P2). To the contrary, Appellants have consistently stated that the meaning of any recited claim language is clear on its face and also when read (as is required by law for determination of definiteness under § 112(P2)) in light of the Specification.

Appellants have previously cited numerous cases (*e.g.*, Solomon v. Kimberly-Clark Corp., Miles Laboratories, Inc. v. Shandon, S3 Inc. v. nVIDIA Corp.) and the M.P.E.P. (*e.g.*, § 2173.02) in support of this proper analysis. Definiteness of claim language is not to be analyzed “in a vacuum.” M.P.E.P. § 2173.02.

Appellants have also not suggested that any claim is limited in scope by any particular described embodiment. Only the explicit language of the claims defines any particular claimed embodiment.

Appellants dispute the relevance of Van Geuns to the present claims.

The portion of Van Geuns indicated by the Examiner was directed primarily to determining the literal scope of a particular claim (Claim 42) in the context of an obviousness rejection. No claim was rejected for indefiniteness, and no claim language was deemed unclear. Accordingly, Appellants do not understand the applicability of Van Geuns to the Examiner’s argument.

Further, the Federal Circuit held: “Van Geuns cannot read an NMR limitation into claim 42 to justify his argument as to the meaning of the ‘uniform magnetic field’” where “claim 42 is not expressly limited to NMR or MRI

apparatus” and “limitations are not to be read into the claims from the specification.” In re Van Geuns, 988 F.2d 1181, 26 U.S.P.Q.2d (Fed. Cir. 1993).

In contrast to what was at issue in Van Geuns, Appellants are not seeking to limit the scope of any claim to any particular described embodiment in order to avoid a prior art rejection. Nor is it necessary here to provide definiteness to any claim by limiting the scope of any recited term. The Examiner has not provided any evidence that any term is unreasonably unclear, and mere breadth of scope cannot be equated with indefiniteness.

In re Van Geuns does not in any way support the Examiner’s refusal to consider allegedly unclear claim language in light of the Specification. Although Appellants maintain that all of the claim language is clear on its face to one having ordinary skill in the art, Appellants have consistently suggested, in accordance with the methodology of a proper § 112(P2) analysis, that the Examiner refer to the Specification, which provides for various illustrative examples—that is the role of the disclosure.



## 2. **Claim Rejections under § 101**

The Examiner still has failed to provide a *prima facie* case that any claim is non-statutory under § 101.

### 2.1. **The Examiner's New Standards, Findings and Authorities**

As discussed in the Appeal Brief, the Section 101 rejection provided in the Second Office Action was terse. It stated only that the rejected claims (a) did not recite a limitation “in the technological arts” and (b) were “abstract ideas which can be performed mentally without interaction of a physical structure.” No legal support was provided for either of these standards for rejection.

In response to Appellants' arguments in the Appeal Brief, the Examiner's Answer introduces:

- a novel and legally baseless *per se* standard mandating that any dependent claim must be rejected under Section 101 if a claim from which it depends is non-statutory (without considering any additional limitations recited in that dependent claim);
- a novel and legally baseless *per se* standard that a method claim must include a step of *providing* any recited device
- a novel “two-prong test” that includes a requirement that a claimed invention be “within the technological arts”;
- new citations to authorities allegedly establishing the “two-prong test” in the 1970s;

- new citations to (and analysis of) Federal Circuit cases allegedly proving the Federal Circuit’s present-day recognition of and adherence to the “two-prong test”;
- new findings that claims are “completely silent with regard to technology” or “are employed completely without the use of any technology whatsoever”; and
- new findings that claims are “purely an abstract idea”.

The Examiner’s new standards, findings and authorities are discussed in detail below.

In summary, Appellants respectfully submit that the Examiner’s findings and standards are improper, and the cited authorities do not establish that any “two-prong test” exists today.

## **2.2. Summary of Appellants’ Arguments**

### **2.2.1. *Per se* rejection of dependent claims is contrary to law**

The Examiner has applied a novel *per se* standard that any claim depending from an allegedly non-statutory independent claim is *per se* also directed to non-statutory subject matter. This *per se* standard is baseless and contrary to law.

Clearly, there is no legal basis for a *per se* rejection of a dependent claim under Section 101 merely because its base independent claim might be rejected as being non-statutory. Each claim must be examined individually for the subject matter it defines, including all of its limitations. Thus, the Examiner did not even properly apply the asserted “two-prong test.”

The Examiner has intentionally failed to construe the subject matter of any dependent claim or to make a determination as to whether the subject matter of a dependent claim is statutory. Accordingly, the Examiner's rejection of all dependent claims as being non-statutory subject matter can only be arbitrary. The Examiner has failed to provide a *prima facie* case that any dependent claim is non-statutory.

### **2.2.2. The “two-prong” test is a fiction**

One issue in this case is whether the Examiner's “two-prong test” for determining whether a claim is directed to non-statutory subject matter under Section 101 has any basis in law.

The Examiner's “two-prong test” is baseless. It is also contrary to law. The cited legal authorities do not stand for the proposition that “within the technological arts” is a requirement for statutory subject matter that is in addition to a requirement of providing for a practical application—i.e., useful, concrete and tangible result.

The Examiner's Section 101 two-prong test is also contrary to law because it relies on In re Toma (C.C.P.A. 1970) as establishing both the Examiner's “technology” requirement and the Examiner's novel Section 101 two-prong test—Toma cannot support any such interpretation. To the contrary, the plain statements of the Toma court preclude the Examiner's assertion that Toma established a lack of “technology” as grounds for rejection under Section 101.

The Examiner's Section 101 two-prong test departs starkly from current Federal Circuit law. In particular, the Examiner's Section 101 two-prong test

flies in the face of the definitive “practical application” standard, rendered in State Street Bank (Fed. Cir. 1998) and AT&T (Fed. Cir. 1999), for determining whether subject matter is statutory.

The Examiner’s Section 101 two-prong test is also contrary to law because it necessarily defines a new category of subject matter (i.e., claimed processes that do not recite “technology” to implement steps) as being unpatentable under Section 101. There are exactly three categories of unpatentable subject matter that have been recognized by the Supreme Court: abstract ideas, natural phenomena, and laws of nature. Diamond v. Diehr (1981). See also, MPEP § 2106, p. 2100-11 (8th ed. Rev. 2, May 2004). The Examiner cannot establish that Appellants’ claims fall into any of these exceptions.

The Examiner’s terse explanations of why recent and relevant case law is devoid of any mention of the “two-prong test” or the additional “technological arts” requirement strain credulity. The Examiner’s Section 101 two-prong test is predicated on what the Examiner admits was never ruled on by the Federal Circuit. The purported legal basis of this test lies in the Examiner’s incredible assertion that the Federal Circuit, in at least State St. Bank and AT & T, “never addressed” yet somehow “already determined” the claims at issue satisfied the Examiner’s alleged “technology arts” prong of the “two-prong test.”

The Examiner’s sole authority for the existence of a two-prong test (allegedly established in the 1970s) rests on the Examiner’s unsupported, present-day rationalization that State St. Bank, AT & T, Arrhythmia and Alappat are not inconsistent with this test. The Examiner’s speculation regarding the Court’s treatment of a fictitious requirement the Examiner freely admits was “never

addressed” by the Federal Circuit in its Section 101 opinions violates stare decisis and strains credulity.

**2.2.3. The analysis under the extraneous “technological arts” requirement is irreconcilable with relevant case law**

The Examiner’s adherence to an extraneous new “technology” requirement defies the relevant case law cited by Appellants. Even more, the Examiner’s use of the extraneous requirement in the Section 101 rejections is merely a transparent attempt to resurrect and re-package a host of discredited and overruled tests for statutory subject matter.

The actual standards applied by the Examiner under the extraneous “technological arts” requirement (i.e., whether a claim can be performed by a person or “mentally without interaction of a physical structure,” or whether a claim fails to “provide” a container or device) are irreconcilable with relevant case law.

Although the Examiner cites cases allegedly in support of the additional “within the technological arts” requirement, nothing in any of these cases supports the actual standards applied. If “within the technological arts” means what the Examiner asserts (i.e., steps cannot be performed by a person or mentally, or claims must “provide” a container or device), the Examiner should be able to point to one case supporting that standard and the Examiner’s analysis. The Examiner has not done so.

The Examiner’s “two-prong test” is contrary to law because in applying it the Examiner holds that a process is directed to unpatentable subject matter

merely because it might be capable of also being performed in the mind of a human. The mere fact that some or all of the steps of a method “may be carried out in or with the aid of the human mind” does not render a sequence of operational steps non-statutory under 35 U.S.C. §101. In re Musgrave (C.C.P.A. 1970). The Examiner ignores this clear case law (which the Examiner himself cited) and is transparently attempting to resurrect an explicitly overruled “mental steps” doctrine.

**2.2.4. The Examiner’s finding that method claims are directed “purely to an abstract idea” contradicts the fact that each claim produces a useful, concrete and tangible result**

The Examiner’s analysis under the extraneous “within the technological arts” requirement is irreconcilable with the relevant case law cited by Appellants. Appellants have consistently argued that every claim produces a useful, concrete and tangible result. As admitted by the Examiner, State St. Bank established that the only proper test for determining whether a claim is directed to an abstract idea is to determine whether the claim provides for a practical application (i.e., produce a useful, concrete and tangible result). If so, it cannot be “purely an abstract idea.”

The Examiner has not provided any evidence that any claim fails to provide a useful, concrete and tangible result. Accordingly, the Examiner cannot maintain that any claim is directed “purely to an abstract idea.”

**2.2.5. Claims do not fall within any recognized exception to statutory subject matter**

Another issue in this case is whether, regardless of whether the “two-prong test” has any basis in law, the claims are directed to statutory subject matter.

As discussed in the Appeal Brief, it is Appellants’ understanding that the Examiner concedes that all claims produce a useful, concrete and tangible result.

Although not recognized by the Examiner, the existence of a useful, concrete, and tangible result necessarily means that the invention cannot be purely an abstract idea, per AT&T and State Street Bank. The Examiner’s attempt to characterize an alleged failure to be “within the technological arts” as equivalent to being “purely an abstract idea” is baseless and contradictory.

There are only three exceptions to statutory subject matter: abstract ideas, laws of nature, and natural phenomena. Since the claims cannot be “purely an abstract idea” and do not fall into one of the other exceptions, the claims must define statutory subject matter.

**2.2.6. The Examiner does not even properly apply the novel “two-prong test”—No substantial evidence that recited terms are not “technology”**

Even if there is an additional “technological arts” requirement (which Appellants dispute), there is no basis for the Examiner’s conclusion that any claim is “completely silent with regard to technology” or does not “at least suggest use of technology.”

Each rejected claim provides at least for receiving or obtaining a signal, data or information. The Examiner has not even attempted to establish that such receiving or obtaining would not involve some type of physical transformation or other practical application. Thus, the Examiner has failed to even attempt to apply his own novel standard for rejection. Accordingly, the Examiner's rejection of claims including such subject matter can only be arbitrary.

The Examiner also has failed to provide any indication of how the Examiner has construed explicitly recited terms such as *device*, *signal*, or *container*. The Examiner has also failed to provide any evidence or rationale that explicitly recited terms such as *device*, *signal*, or *container* (which have not been construed) are not "limitations within the technological arts." Thus, the Examiner has failed to even attempt to apply his own novel standard for rejection. Accordingly, the Examiner's rejection of claims including such subject matter can only be arbitrary.

Accordingly, all of the Section 101 rejections are inappropriate and Appellants respectfully request that the rejections be reversed.

## **2.3. GROUP I: Claims 3 and 7-11**

### **2.3.1. The Claims of GROUP I are Statutory**

The proper legal standard for statutory subject matter still has not been applied to the rejected claims. In fact, applying the proper legal standard demonstrates that all claims are directed to statutory subject matter.



Further, even applying the Examiner's own novel standard(s), the claims of GROUP I are directed to statutory subject matter.

**2.3.2. Appellants' Understanding of the Examiner's New Standard: The Two-Prong Test**

The claims of GROUP are rejected under the Examiner's novel "two-prong" test of:

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result.

(hereinafter "the two-prong test"). [Examiner's Answer, page 18].

The Examiner's two-prong test includes a novel requirement that According to the Examiner, "the first test of whether an invention is eligible for a patent is to determine if the invention is within the 'technological arts'" (hereinafter the Examiner's "technology" requirement). [Examiner's Answer, page 18]. The legal basis of the Examiner's "technology" requirement and the two-prong test, which Appellants dispute, is discussed below.

The second requirement of the Examiner's Section 101 two-prong test is that a claimed invention must produce "a useful, concrete, and tangible result" under AT&T and State St. Bank [Examiner's Answer, pages 18, 20]. The "useful, concrete, and tangible result" requirement is referred to hereinafter as the "UCT result test" or "practical application standard." By its language and the

reference made by the Examiner to AT&T and State St. Bank as its legal basis, the UCT result test appears to resemble the legal standard regarded by Appellants as the only and proper legal standard for determining statutory subject matter under Section 101.

As discussed further below, however, the Examiner clearly has failed to appreciate the significance of the UCT result test. In particular, contrary to law, the Examiner insists that a claim that produces a useful, concrete, and tangible result can also be held to be directed to only an abstract idea (i.e., to not have a practical application). This is an impossibility under Federal Circuit jurisprudence.

### **2.3.3. Appellants' Understanding of Why the Claims Fail the Examiner's New Two-Prong Test: No "technology"**

It is Appellants' understanding that the Examiner bases the rejection of all of the pending claims solely on the asserted failure of the claimed invention to satisfy the first requirement (the "technology" requirement) of the Examiner's proposed "two-prong test." The Examiner asserts, for example, that Claims 3 and 7-11 "are completely silent with respect to technology," process steps "are employed completely without the use of any technology whatsoever," and the "claims are completely devoid of any means to carry out a process implementing" the recited steps. [Examiner's Answer, page 23].

Appellants understand that the rejection of the claims for failure to satisfy this first "prong" of the proposed "two-prong test" is now based on one or more of the following findings by the Examiner:

- independent Claim 3 does not recite “a limitation in the technological arts” [Examiner’s Answer, page 17];
- independent Claim 3 “can be performed mentally without interaction of a physical structure” [Examiner’s Answer, page 17];
- independent Claim 3 is “**completely silent with regard to technology**” and is “**process steps that are employed completely without the use of any technology whatsoever**” [Examiner’s Answer, page 23 (emphasis in original)];
- independent Claim 3 is “no more than a suggested idea that a person can come to the conclusion that two wireless communicating devices are apparently positioned within their respective communication range, upon noticing (by the person) some changes in an environment” [Examiner’s Answer, page 23];
- independent Claim 3 “may be viewed...as nothing more than simply *observing an environment, and making a decision about something based at least in part of [sic—on?] said observation*” [Examiner’s Answer, page 24 (emphasis in original)]; and
- independent Claim 3 does “not even recite ‘providing a first and a second containers’ step” [Examiner’s Answer, page 23].

The new reasons for the finding of non-statutory subject matter are discussed below. As the asserted failure of the claims to recite “technology” is the sole basis for the rejection, if that first “prong” of the Examiner’s proposed “two-prong test” imposes a separate requirement without basis in law, or otherwise departs from the requisite legal analysis under Section 101, the rejection is flawed.

Also, if the Examiner has failed to establish that the claims fail to comply with the Examiner's novel "technology" requirement, the rejection is flawed.

#### **2.3.4. The proper legal standard under § 101**

A discussion of the proper legal standard for statutory subject matter under § 101 is provided in the Appeal Brief at pages 28-30.

The proper legal test for the presence of statutory subject matter is only that a claimed process or apparatus produce a "useful, concrete and tangible result". See, e.g., State St. Bank & Trust Co. v. Signature Fin. Group, Inc., 149 F.3d 1368, 1375, 47 USPQ2d 1596, 1602 (Fed. Cir. 1998), cert. denied, 525 U.S. 1093, 142 L. Ed. 2d 704, 119 S. Ct. 851 (1999) ("For purpose of our analysis, as noted above, claim 1 is directed to a machine programmed with the Hub and Spoke software and admittedly produces a 'useful, concrete, and tangible result.' ... This renders it statutory subject matter, even if the useful result is expressed in numbers, such as price, profit, percentage, cost, or loss."); AT & T Corp., 172 F.3d at 1361 ("[T]he focus is understood to be not on whether there is a mathematical algorithm at work, but on whether the algorithm-containing invention, as a whole, produces a tangible, useful, result."). See also, State St. Bank, 149 F.3d at 1373 ("In Alappat, we held that data, transformed by a machine through a series of mathematical calculations to produce a smooth waveform display on a rasterizer monitor, constituted a practical application of an abstract idea ... because it produced 'a useful, concrete and tangible result'--the smooth waveform); State Street Bank, 149 F.3d at 1373 ("in Arrhythmia Research Technology Inc. ... , we held that the transformation of electrocardiograph

signals from a patient's heartbeat by a machine through a series of mathematical calculations constituted a practical application of an abstract idea ... because it corresponded to a useful, concrete or tangible thing--the condition of a patient's heart" (citations omitted)).

The reciting of physical limitations, for example, may be helpful, but is not necessary to render a claim statutory. AT & T Corp., 172 F.3d at 1359 ("Whatever may be left of the earlier test, if anything, this type of physical limitations analysis seems of little value...."). Even where a claim incorporates a mathematical algorithm, in contrast to focusing on a physical limitations inquiry, the inquiry deemed the "ultimate issue" "focuses on whether the mathematical algorithm is applied in a practical manner to produce a useful result." AT & T Corp., 172 F.3d at 1359-60.

In discussing this proper legal test, the Court of Appeals for the Federal Circuit has also acknowledged the judicially-created exceptions to statutory subject matter. See, e.g., AT & T Corp., 172 F.3d at 1355 ("[The Supreme Court] has specifically identified three categories of unpatentable subject matter: 'laws of nature, natural phenomena, and abstract ideas.'" (quoting Diamond v. Diehr, 450 U.S. at 185)); State St. Bank, 149 F.3d at 1373. The Court also clarified that "certain types of mathematical subject matter, standing alone, represent nothing more than abstract ideas until reduced to some type of practical application, i.e., 'a useful, concrete and tangible result.'" State Street Bank, 149 F.3d at 1373.

Clearly, a claimed invention that satisfies this proper standard for statutory subject matter (e.g., by producing a useful, concrete and tangible result) cannot, by definition, also fall within the judicially-created exception of abstract ideas.

### **2.3.5. The Claims Meet the Proper Standard for Statutory Subject Matter**

#### **Useful, Concrete and Tangible Result**

As discussed in the Appeal Brief at pages 30-32, the pending claims produce a useful, concrete and tangible result, which Appellants regard as the only requirement under § 101.

The Examiner does not dispute this.

As Appellants and the Examiner apparently agree that each of Claims **3 and 7-11** produces a useful, concrete and tangible result, and is therefore necessarily limited to a practical application, the rejection of Claims **3 and 7-11** for lack of statutory subject matter cannot stand.

Specifically, Claims **3 and 7-11** cannot be directed to merely an idea in the abstract because they are directed to a practical application—i.e., a useful, concrete and tangible result. As the practical application standard has been defined by the Federal Circuit in AT & T and State St. Bank, the claims cannot be directed to a practical application and also be directed to only an abstract idea.

Contrary to relevant case law, however, this is precisely the position taken by the Examiner. The Examiner has never attempted to provide any rationale to explain this inconsistent and deeply flawed result of the application of the Examiner's "technology" requirement of the "two prong" test.

As the claims cannot be only abstract ideas and do not fall within any of the other two judicially-created exceptions to patentable subject matter, the claims meet the proper standard for statutory subject matter.

**All Claims Clearly Involve Containers for Storing Medicine**

Although not required for purposes of 35 U.S.C. § 101, independent Claim 3 involves two containers for storing medicine and determining the relative positioning of such containers. Such particular physical objects and determinations with respect to the positions of those particular physical objects are examples of a practical application and further render the claims of GROUP I statutory.

**All Claims Clearly Relate to Wireless Communication**

The Examiner notes that the claims are related to “two wireless communicating devices.” [Examiner’s Answer, page 23].

For sake of clarity, it is not completely accurate to state the devices are necessarily communicating wirelessly with one another. In fact, although not required for purposes of 35 U.S.C. § 101, independent Claim 3 explicitly involves determining whether two containers for storing medicine were positioned so as to wirelessly communicate.

Regardless, the claims of GROUP I clearly involve devices (i.e., containers for storing medicine) that may have been positioned so as to wirelessly communicate. This particular practical application further renders the present claims statutory.

### **All Claims Also Result in Physical Transformation**

Although not required for purposes of 35 U.S.C. § 101, independent Claim 3 results in some type of physical transformation. Such a physical transformation is one example of a practical application and further renders the present claims statutory.

Contrary to what the Examiner implies (see Examiner's Answer, pages 23-24), it is not required that a claim result in a physical transformation. See, e.g., AT&T, 172 F.3d at 1357, 50 USPQ2d at 1452. See also, Diehr, 450 U.S. at 192 (the "e.g." signal denotes that physical transformation is an example, not an exclusive requirement for satisfying § 101); Arrhythmia, 958 F.2d at 1060, 22 USPQ2d at 1039 (the transformation simply confirmed that Arrhythmia's method claims satisfied § 101 because the method produced a number which had specific meaning - a useful, concrete, tangible result - not a mathematical abstraction).

All the claims of GROUP I that were rejected as nonstatutory (including independent Claim 3, and their respective dependent claims) result in a physical transformation – namely: *receiving a signal*.

It is impossible to receive anything that can be considered a *signal* without implicating the physical transformation of something, such as (i) the air (by creating sound), (ii) a physical thing that produces sound (by creating sound), (iii) a display device (by creating images on the display), (iv) a printer (by creating text on a substrate), or (v) light (by creating a visible indication).

Moreover, since a *signal* is something that in each claim must be in some way communicated by someone or something to someone or something, the very



act of any communication causes a physical transformation in whatever medium is used to produce the communication.

**2.3.6. The Examiner Imposes an Improper Requirement to Recite “Technology,” “Computer,” or a “Physical Transformation”**

The Examiner’s “technology” requirement is nothing less than a requirement to recite a “computer,” “physical transformation,” or other alleged evidence of “technology.” The requirement is contrary to law and cannot be required to render a claimed process statutory, particularly where that process, like independent Claim 3, is already directed to a practical application—i.e., produces a useful, concrete, and tangible result.

The explicit reciting of “means to carry out a process” (see Examiner’s Answer, page 23) cannot be required to render a claimed process statutory. The reciting of physical limitations may be helpful, but are not necessary to render a claim statutory. AT & T Corp., 172 F.3d at 1359 (“Whatever may be left of the earlier test, if anything, this type of physical limitations analysis seems of little value....”). Even where a claim incorporates a mathematical algorithm, in contrast to focusing on a physical limitations inquiry, the proper inquiry “focuses on whether the mathematical algorithm is applied in a practical manner to produce a useful result.” AT & T Corp., 172 F.3d at 1359-60.

It is a misunderstanding of Federal Circuit case law to contend that process claims lacking physical limitations are not patentable subject matter. “Since the claims at issue in this case are directed to a process in the first instance, a

structural inquiry is unnecessary.” AT & T Corp., 172 F.3d at 1359. Further, it is well settled that one need not claim in a patent every device required to enable the invention to be used. See, e.g., Asyst Technologies, Inc. v. Empak, Inc., 268 F.3d 1364 (Fed. Cir. 2001).

The Examiner’s type of analysis may derive from a prior test for statutory subject matter that has been discredited. AT & T Corp., 172 F.3d at 1359 (“Whatever may be left of the earlier test, if anything, this type of physical limitations analysis seems of little value ...”) This type of physical limitations analysis is of little value in the Section 101 analysis because “the mere fact that a claimed invention involves inputting numbers, calculating numbers, outputting numbers, and storing numbers, in and of itself, would not render it non-statutory subject matter, unless, of course, its operation does not produce a ‘useful, concrete and tangible result.’” AT & T Corp., 172 F.3d at 1359.

Appellants’ understand that the rejection of Claim 3 for failure to satisfy the Examiner’s “technology” requirement are based on the following new findings by the Examiner first made of record in the Examiner’s Answer:

[T]he claims are completely silent with regard to technology and is [sic] purely an abstract idea or process steps [sic] that are employed completely without the use of any technology whatsoever. The claims are no more than a suggested idea that two wireless communicating devices are apparently positioned within their respective communication range, upon noticing (by the person) some changes in an environment.

[Examiner’s Answer, page 23].

Thus, the Examiner expressly concedes that Claim 3 is rejected for constituting only a “purely abstract idea” or “no more than a suggested idea.” As

the claims are admittedly directed to “practical applications,” i.e., they produce useful, concrete and tangible results (which the Examiner has not disputed), the Examiner’s analysis under the Examiner’s “two-prong test” reaches the impossible conclusion, discussed above, that the claims are only disembodied, abstract ideas.

The Examiner also expressly concedes that the Examiner’s Section 101 two-prong test in fact demands that a particular “computer,” “data processing device,” or “use of technology” be expressly recited in a claimed process. The Examiner continues:

The claims are completely devoid of any means to carry out a process implementing the idea of receiving a signal; and determining whether a first container for storing a first medicine was positioned so as to wirelessly communicate with a second container.

[Examiner’s Answer, page 23]. The Examiner further notes:

There are absolutely no limitations included in the independent claim that would at least suggest use of technology for implementing “receiving” or “determining” steps, for example a data processing device or any communication means. The claims do not include limitations that would suggest that a computer is being used to transform the data from one form to another, that would place the invention in the technological arts.

[Examiner’s Answer, page 23]. The Examiner thus admits that the Examiner’s novel “technology” requirement would require, in defiance of current case law, that Appellants claim a particular “means to carry out a process,” a “computer,” a “data processing device,” or “technology” for providing a physical transformation of data.

There is no requirement that Appellants recite any particular means by which any step may be carried out. A claim does not have to be “a self-contained explanation of every step. That is not the role of claims. The purpose of claims is not to explain the technology or how it works, but to state the legal boundaries of the patent grant.” S3 Inc. v. nVIDIA Corp., 259 F.3d 1364, 1369 (Fed. Cir. 2001).

Accordingly, there is no requirement that a claim recite any “device,” “computer,” or “technology” by which it may be carried out, so long as, in accordance with Section 112, one having ordinary skill would be able to make or use the claimed invention in light of the disclosure and the claim itself, when read in light of the Specification, particularly points out and claims, with only a reasonable degree of precision, that which Appellants regard as their invention.

Even where a claim incorporates a mathematical algorithm, in stark contrast to focusing on a physical limitations inquiry (and thus in stark contrast to what is required by the Examiner’s novel “two-prong test”), the proper inquiry under Section 101 “focuses on whether the mathematical algorithm is applied in a practical manner to produce a useful result.” AT & T, 172 F.3d at 1359-60. Accordingly, the type of physical limitations analysis required under the Examiner’s “technology” requirement must be of little if no value in the Section 101 analysis.

The Examiner further finds that “there does not appear to be any physical transformation of data.” [Examiner’s Answer, pages 23-24]. There is no requirement that data or a characteristic of an item (or any substance) has to change or be transformed in accordance with a claimed process. Physical

transformation by a claimed process “is not an invariable requirement, but merely one example of how a mathematical algorithm may bring about a useful application.” AT & T, 172 F.3d at 1357. See also, Diehr, 450 U.S. 175, 192 (1981) (the “e.g.” signal denotes that physical transformation is an example, not an exclusive requirement for satisfying § 101); Arrhythmia, 958 F.2d 1053, 1060, (Fed. Cir. 1992) (the transformation simply confirmed that Arrhythmia’s method claims satisfied § 101 because the method produced a number which had specific meaning - a useful, concrete, tangible result - not a mathematical abstraction).

In other words, contrary to the Examiner’s assertion, a claim, even if it recites an algorithm, does not require a “computer,” “data processing device,” “technological” limitation or any other type of physical limitation to be deemed statutory.

**2.3.7. Failure to Recite Steps of “providing a first and a second container” is Not Grounds for Rejection Under Section 101**

The Examiner further now finds: “[T]he claims do not even recite ‘providing a first and a second containers’ step.” [Examiner’s Answer, page 23]. The Examiner thus imposes a novel and legally baseless *per se* requirement that a method claim reciting a step that refers to a “container” must include an additional step of “providing” for the recited “container.”

The Examiner does not indicate any authority for this *per se* standard. Appellants are not aware of any requirement in law that a recited device or

“container” must be explicitly “provided for” in order for a claim to be statutory subject matter.

The Examiner might be suggesting that including such a “providing” step would render independent Claim 3 statutory. If so, it is not clear to Appellants why Appellants’ present reciting of *container for storing medicine* fails to be statutory under the Examiner’s “two-prong test,” but simply reasserting the existence of such a *container* in a separate “providing” step would comply with the Examiner’s “two-prong test.”

**2.3.8. “making a decision” is Not Grounds for Rejection Under Section 101**

The Examiner further now finds: “As a result, the above-cited limitation may be viewed, for example, as nothing more than simply *observing an environment, and making a decision about something based at least in part of* [sic] *said observation.*” [Examiner’s Answer, page 24].

The Examiner thus appears to be imposing a novel and legally baseless *per se* requirement that “making a decision” renders independent Claim 3 non-statutory *per se*.

The Examiner’s new findings provide no basis at all for a rejection under Section 101. Clearly, the fact that a decision or determination is made does not render Claim 3 unpatentable *per se*.

Further, even if such a determination required subjectivity, “[a] step requiring the exercise of subjective judgment without restriction might be

objectionable as rendering a claim indefinite, but this would provide no statutory basis for a rejection under 35 USC 101.” In re Musgrave, 57 CCPA 1352, 1367 (CCPA 1970) (emphasis added). Also, as discussed above, the mere fact that a claim could be performed by a human is not a proper basis for finding the claim non-statutory.

The Examiner might be saying that the claimed step of *determining whether a first container for storing a medicine was positioned so as to communicate wirelessly with a second container for storing medicine* is indefinite, not enabled, and / or overbroad. However, “[w]hether the patent’s claims are too broad to be patentable is not to be judged under § 101, but rather under §§ 102, 103 and 112.” State St. Bank, 149 F.3d at 1377.

Accordingly, even if independent Claim 3 were directed broadly to “making a decision about something” based on “observing an environment,” this alone would not support a rejection under Section 101.

Of course, in attempting to support the Section 101 rejection the Examiner goes too far in generalizing the subject matter of independent Claim 3. Claim 3 explicitly recites *receiving a signal*, not “observing an environment.” Also, Claim 3 explicitly recites *determining whether a first container for storing a first medicine was positioned so as to wirelessly communicate with a second container for storing a second medicine based at least in part on the signal*. This is a particular determination related to containers for storing medicine and their positioning, not just “making a decision.” To the extent the Examiner is relying upon this over-generalization of the claimed subject matter in rejecting Claim 3, the § 101 rejection cannot stand.

**2.3.9. The Examiner does not even properly apply the novel  
“two-prong test”—No substantial evidence that *signal*,  
*wirelessly communicate*, or *container for storing medicine*  
does not involve or suggest “technology”**

Even if there is an additional “technology” requirement (which Appellants dispute), there is no basis for the Examiner’s conclusion that independent Claim 3 is “completely silent with regard to technology” and contains “absolutely no limitations...that would at least suggest use of technology.” [Examiner’s Answer, page 23].

The Examiner clearly acknowledges that independent Claim 3 recites containers for storing medicine and making a determination related to the position of such containers. [Examiner’s Answer, page 23].

In fact, the Examiner characterizes the containers as “wireless communicating devices” having “their respective communication range.” [Examiner’s Answer, page 23]. The Examiner has not even attempted to reconcile these findings with the assertions that the claims do not “at least suggest use of technology.”

The Examiner also has failed to provide any indication of how the Examiner has construed explicitly recited terms such as *signal*, *wirelessly communicate*, or *container*. The Examiner has also failed to provide any evidence or rationale that explicitly recited terms such as *signal*, *wirelessly communicate*, or *container* (which have not been construed) are not “limitations within the technological arts.” Thus, the Examiner has failed to even attempt to



apply his own novel standard for rejection. Accordingly, the Examiner's rejection of claims including such subject matter can only be arbitrary.

**2.3.10. Appellants' Understanding of the New Legal Basis for the Standard Used by the Examiner**

In response to Appellants' Appeal Brief, the Examiner for the first time asserts a legal basis for the Examiner's Section 101 two-prong test. In summary, the Examiner asserts:

- (i) the Examiner's "technology" requirement was established by In re Toma;
- (ii) the Examiner's Section 101 two-prong test was "evident" in In re Toma;
- (iii) claims at issue in AT & T (Fed. Cir. 1999), State Street Bank (Fed. Cir. 1998), In re Alappat (Fed. Cir. 1994) (en banc), and Arrhythmia (Fed. Cir. 1992) would have satisfied the Examiner's "technology" requirement (even though the Examiner also admits that such a "technology" requirement was "never addressed");
- (iv) a "fundamental premise," rooted in the Constitution, that a patent must itself "promote the progress of 'science and the useful arts'"; and
- (v) the UCT result test was established in State St. Bank.

[Examiner's Answer, pages 17-23].

The Examiner's "technology" requirement, the Examiner's Section 101 two-prong test, and the purported legal bases (i)-(v) are discussed in more detail below.

**2.3.11.      The Examiner Improperly Relies on the Silence of  
the Federal Circuit as Proof of a “Technology”  
Requirement**

The Examiner’s insistence that the Federal Circuit considered and resolved the issue of a “technology” requirement in each of the State St. Bank, AT & T, Alappat, and Arrhythmia decisions is baseless and contrary to law. To the extent that the Examiner relies upon such silence as grounds for the Examiner’s “technology” requirement, neither that requirement nor the Examiner’s Section 101 two-prong test can stand.

Every first-year law school curriculum includes instruction on *stare decisis*. According to this most fundamental of legal tenets, a previous decision of a court is subsequently binding on an issue of law when the issue is raised before the court, decided by the court, and made a part of the opinion by the court.

Conversely, it is beyond dispute that a legal principle, which has never been mentioned in any opinion, not even in dicta, is not binding precedent.

Nevertheless, that is the incredible legal position proffered by the Examiner—that the case law imposes or (at least by its silence) endorses a “requirement” that no Federal Circuit court has ever mentioned or ruled on.

Although the Examiner’s position is quite clearly anathema to the American legal principle of *stare decisis*, it is fundamental to the Examiner’s defense of the legal basis two-prong test in this appeal.

Whether a patent claim is directed to statutory subject matter under 35 U.S.C. § 101 is a question of law reviewed without deference. AT & T, 50 U.S.P.Q.2d (BNA) 1447, 1449, 172 F.3d 1352, 1355 (Fed. Cir. 1999). The

Examiner does not provide any hint of a rationale as to why the Federal Circuit, reviewing *de novo* an issue of statutory subject matter, would fail even to mention all of the requirements relevant to that inquiry. The discrepancy becomes even more glaring in light of the thorough treatment given to Section 101 by State Street Bank and AT & T in particular.

For the record, Appellants note that Alappat makes no mention of a “two prong test” related to the “technological arts,” the “technological arts,” a “technology” requirement, Toma, or Musgrave.

Arrhythmia makes no mention of a “two prong test” related to the “technological arts,” the “technological arts,” a “technology” requirement, or Musgrave. Toma is cited in Arrhythmia solely for the proposition that Toma held that using a digital computer to translate technical languages was not an algorithm. Arrhythmia, 22 U.S.P.Q.2D (BNA) 1033, 958 F.2d 1053, 1063.

State St. Bank makes no mention of a “two prong test” related to the “technological arts,” the “technological arts,” a “technology” requirement, Toma, or Musgrave.

AT & T makes no mention of a “two prong test” related to the “technological arts,” the “technological arts,” a “technology” requirement, or Toma. AT & T only mentions Musgrave as an example of those CCPA decisions that announced “more expansive principles formulated with computer technology in mind.” AT & T, 50 U.S.P.Q.2D (BNA) 1447, 172 F.3d 1352, 1356.

The Examiner concedes that State St. Bank and AT & T “never addressed” the purported “technological art” test or prong. [Examiner’s Answer, pages 19, 20 (“The decision in State Street Bank.... never addressed this prong of the

test.”); page 20 (“Again, AT & T never addressed the second part of the analysis, i.e., the ‘technological arts’ test....”)].

The Examiner argues that the “technology” requirement of the “two-prong test” was never addressed in AT & T because the court “recognized that the claims require the use of switches and computers.” [Examiner’s Answer, page 20]. The Examiner argues that the issue was never addressed in State St. Bank “because the invention in State Street...was already determined to be within the technological arts under the Toma test.” [Examiner’s Answer, page 20]. The Examiner further asserts: “In Alappat, the claimed invention was for a machine that achieved certain results and was therefore, already considered to involve the technological arts.” [Examiner’s Answer, page 21].

The Examiner has no legal grounds for making these interpretations.

The Examiner concludes that “the claims analyzed in AT & T [and in Alappat] clearly involved the technological arts as recognized by the court and, therefore, whether or not the claimed invention involved the technological arts was not an issue.” [Examiner’s Answer, page 22 (emphasis added)]. Appellants again note that in neither AT & T nor Alappat did the Federal Circuit refer to the “technological arts,” much less “recognize” that the claims “clearly involved” the “technological arts.”

With respect to State St. Bank and Arrhythmia, the Examiner also concludes that the respective claims discussed “clearly involved the technological arts, and therefore whether or not the claimed invention involved the technological arts was not an issue” but the Examiner does not even attempt to suggest that the courts recognized this. [Examiner’s Answer, pages 21, 23].

Clearly, then, the Examiner is the only one of record to have made this determination.

In summary, the Examiner's purported legal basis for a new "technology" requirement rests on the startling and indefensible propositions that:

- (i) a legal issue "never addressed" in State Street Bank was nonetheless "clearly involved" and "already determined" by the Examiner
- (ii) a legal issue never even mentioned in Arrhythmia was nonetheless "clearly involved" as determined by the Examiner,
- (iii) a legal issue "never addressed" was nonetheless "clearly involved" and "recognized" by the court in AT & T, and
- (iv) a legal issue never even mentioned was nonetheless "already considered" and "recognized" by the court in Alappat.

[Examiner's Answer, pages 19-23].

The Examiner thus proposes that a legal issue is not really an issue when the answer to the issue is clear (to the Examiner)—even if that issue is supposedly critical to determining whether something is statutory subject matter (e.g., as part of a purported "two-prong test"). In other words, the Examiner is proposing that the respective judges would not have wasted any time or words on what the Examiner insists is a critical requirement endorsed by the Federal Circuit.

The Examiner implies that the "technology" requirement itself was too obvious to mention at all, and that its satisfaction was too obvious to merit any discussion at all.

Appellants and the Examiner agree that the Federal Circuit has never addressed the “technological arts” or any “technology” requirement in any of the decisions that deal with Section 101, many of which are groundbreaking and redefined the legal analysis under Section 101. Nonetheless, the Examiner also implies that despite its silence, the Federal Circuit has tacitly endorsed a “technological arts” requirement that is separate from and as necessary as the Federal Circuit’s UCT result test.

Appellants respectfully note that the State St. Bank and AT & T courts discussed the requirements for patentable subject matter in detail and at some length. State St. Bank in particular is universally regarded as redefining the Section 101 inquiry. See, e.g., Christopher L. Ogden, “Patentability of Algorithms After State Street Bank: The Death of the Physicality Requirement,” 83 J. Pat. & Trademark Off. Soc’y 491 (noting that State Street Bank, along with the later supporting decision AT & T, “marks a departure from the line of Supreme Court and Federal Circuit cases beginning with Gottschalk v. Benson, modified by Diamond v. Diehr...and expanded upon by the Federal Circuit decision In re Alappat.”); William T. Ellis & Aaron Chatterjee, “State Street” Sets Seismic Precedent, NAT’L L.J., Sept. 21, 1998, at B13.

The Examiner seems to make much of the fact that the invention in State St. Bank was claimed as a “computerized” or “data processing” system comprising means for performing various steps. [Examiner’s Answer, pages 20, 21]. Although the algorithm was claimed as a system, the court stated that “for the purposes of a § 101 analysis, it is of little relevance whether [the claim] is directed to a ‘machine’ or a ‘process.’” State St. Bank, 47 U.S.P.Q.2D (BNA)

1596, 149 F.3d at 1372. Which of the four enumerated categories of patentable subject matter a claim is directed to is of little relevance for the purposes of § 101 analysis—the focus instead is properly “on the essential characteristics of the subject matter, in particular, its practical utility.” State St. Bank, 47 U.S.P.Q.2D (BNA) 1596, 149 F.3d at 1372, 1375. Thus, contrary to the Examiner’s assertion, so long as the claimed invention produced “a useful, concrete and tangible result,” the particular statutory class to which the patentee chooses to direct the recited functionality was irrelevant.

The scope of the inquiry under Section 101 and the principles applied are the “same regardless of the form – machine or process – in which a particular claim is drafted.” AT&T, 172 F.3d at 1357-58, 50 U.S.P.Q.2D (BNA) 1447 (citing with approval Alappat, 33 F.3d 1526, 1581, 31 U.S.P.Q.2d (BNA) 1545 (Fed. Cir. 1994) (Rader, J., concurring) (“Judge Rich, with whom I fully concur, reads Alappat’s application as claiming a machine. In fact, whether the invention is a process or a machine is irrelevant. The language of the Patent Act itself, as well as Supreme Court rulings, clarifies that Alappat’s invention fits comfortably within 35 U.S.C. § 101 whether viewed as a process or a machine.”)).

Thus, contrary to the Examiner’s assertion, so long as the claimed invention produced “a useful, concrete and tangible result,” the particular statutory class to which the patentee chooses to direct the recited functionality is irrelevant. In fact, the Federal Circuit in State St. Bank concluded that “after Diehr and Alappat, the mere fact that a claimed invention involves inputting numbers, calculating numbers, outputting numbers, and storing numbers, in and of itself, would not render it non-statutory subject matter, unless, of course, its

operation does not produce a ‘useful, concrete and tangible result.’” State St. Bank, 47 U.S.P.Q.2D (BNA) 1596, 149 F.3d at 1374.

It must be noted that the Court did not add anything along the lines of: “or unless, of course, if it is not in the technological arts or does not recite technology.” It is inconceivable that in discussing the very reasons why the respective inventions at issue in Diehr and in Alappat were patentable and outlining the inquiry that is the “ultimate issue” (whether the claimed invention as a whole is drawn to statutory subject matter) the Court in that discussion would have neglected to mention an additional “technology” requirement.

It is highly unlikely that the inventions at issue in Diehr and Alappat clearly were deemed statutory subject matter because the Court silently considered some “technology” requirement to be satisfied and also because the Court found they were each directed to a practical application, as the Examiner asserts. To the contrary, the Court’s discussion in State St. Bank intimates that had the Diehr and Alappat inventions involved only the manipulation of numbers, they would only be rendered non-statutory subject matter if they had failed to produce a “useful, concrete and tangible result.”

It appears highly unusual that both the State St. Bank and AT & T decisions would fail completely to mention a requirement of the proper legal test (and even more unusual not to mention a “requirement” allegedly springing from the U.S. Constitution). [Examiner’s Answer, page 18]. The Federal Circuit thoroughly reviewed the jurisprudence related to statutory subject matter and unambiguously overruled and redefined the law of statutory subject matter. The



Federal Circuit could not have failed to mention any “requirement” in the new standard.

The Examiner must also concede that the record reflects that only the Examiner recognizes that the claims in State St. Bank, AT & T, Alappat, and Arrhythmia “clearly involved the technological arts” or were “already determined to be within the technological arts under the *Toma* test.” As admitted by the Examiner, no Federal Circuit decision (and certainly not the ones cited by the Examiner) has ever mentioned, much less addressed, such a determination.

It goes without saying that no claim has ever been rejected based on the purported “technology” requirement.

The Examiner perhaps proposes a rationale for why the courts never addressed the issue: the issue had been silently considered and silently resolved. This is at odds with the very foundation of the American legal system and *stare decisis*.

The Examiner, however, does not feel constrained by the actual opinions and analyses of the cases—i.e. by what was actually addressed and decided. Operating in a legal vacuum, the Examiner apparently feels free to repackage the courts’ analyses, and to hypothesize as to what tests, issues, and “requirements” the court might have silently considered yet “never addressed.”

**The Examiner, therefore, is merely theorizing how the Examiner might have employed his two-prong test in light of the facts of each cited case.**

There are innumerable issues that the court did not address in State St. Bank or AT & T. Contrary to the Examiner’s new argument, however, a court’s

silence on any number of issues cannot be interpreted as the court's consideration of any such issues, much less a particular finding related to any one of those issues. By the Examiner's logic, when analyzing a court's opinion, that court's failure even to mention the existence of one or more issues or purported "prongs" nonetheless may be interpreted in legal argument as supporting: (i) the existence of a two-, three-, or ten-prong test that includes any number of issues not actually discussed; (ii) the court's consideration of a particular unmentioned "prong"; and (iii) a particular finding by that court with respect to an unmentioned "prong." This rationale defies logic and jurisprudence.

Briefly, Appellants note the fact that the manner in which the Examiner's Section 101 two-prong test predated (by twenty years) the creation of the UCT result test in State St. Bank is not really explained. The implication is that the two-prong test that was purportedly "evident" in Toma actually relied on the now-discredited Freeman-Walter-Abele test as the second "prong," and not the UCT result test established in State Street Bank. [Examiner's Answer, page 19].

The Examiner further implies that the substitution of the new UCT result test for the Freeman-Walter-Abele test in the Examiner's Section 101 two-prong test took place immaculately and without comment at the very instant that the UCT result test came to life in State Street: "State Street abolished the Freeman-Walter-Abele test used in Toma." [Examiner's Answer, page 20].

Applicants find it unusual to the point of absurdity that the Federal Circuit in State St. Bank, in light of such a dramatic change to a purported "two-prong test" (i.e., the replacement of one of its two prongs), went without any mention of either a "two-prong test," Toma, the "technological arts," or even the Examiner's

“technology” requirement that (according to the Examiner) the new UCT result test was suddenly paired with for analysis of all statutory subject matter.

The failure of the Federal Circuit in these watershed decisions to mention the “technological arts” or the Examiner’s “technology” requirement is compelling evidence that such standards do not exist under current Federal Circuit law. Certainly, the Examiner’s “technology” requirement cannot exist as a requirement separate from the “practical application” standard—i.e., whether the claimed invention has a useful, concrete, and tangible result.

**2.3.12. A New Category of Unpatentable Subject Matter is Defined in a Manner Clearly Contrary to Law**

The sole issue on appeal is whether the Examiner has performed the proper inquiry under 35 U.S.C. § 101. The Examiner’s novel standard under Section § 101 defines a new category of unpatentable subject matter, and thus is clearly contrary to law.

There are only three exceptions to patentable subject matter. Specifically, any process, machine, manufacture, or composition of matter is statutory subject matter provided it is neither (i) an abstract idea, (ii) a law of nature nor (iii) a natural phenomena. See Diamond v. Chakrabarty, 447 U.S. 303, 309, 65 L. Ed. 2d 144, 100 S. Ct. 2204, 206 U.S.P.Q. (BNA) 193 (1980) (quoting S. Rep. No. 82-1979, at 5 (1952); H.R. Rep. No. 82-1923, at 6 (1952)); Diamond v. Diehr, 450 U.S. 175, 182, 185, 67 L. Ed. 2d 155, 101 S. Ct. 1048, 49 U.S.L.W. 4194, 209 U.S.P.Q. (BNA) 1 (1981).

The U.S. Patent and Trademark Office also recognizes that there are only three exceptions to patentable subject matter:

The subject matter courts have found to be outside the four statutory categories of invention is limited to abstract ideas, laws of nature and natural phenomena.

MPEP § 2106, p. 2100-11 (8<sup>th</sup> ed. Rev. 2, May 2004) (emphasis added). Thus, the U.S. Patent and Trademark Office officially interprets 35 U.S.C. § 101 as being circumscribed by only three exceptions. The MPEP does not have the force and effect of law; however, it is entitled to judicial notice as the agency's official interpretation of statutes and regulations, provided it is not in conflict with the statutes and regulations. In re Portola Packaging, 110 F.3d 786, 788, 42 U.S.P.Q.2d (BNA) 1295 (Fed. Cir. 1997).

To the extent that it defines a category of subject matter that is unpatentable, beyond the only three recognized exceptions to patentable subject matter, the Examiner's Section 101 two-prong test is at odds with both the courts' and the PTO's interpretation of Section 101. Accordingly, the test is improper and the rejection should be reversed.

**2.3.13.      No "Technology" Requirement Was Established in  
Toma**

The Examiner's reliance on In re Toma, 575 F.2d 872, 197 U.S.P.Q. (BNA) 852 (C.C.P.A. 1978) as establishing either (i) a "technology" requirement or (ii) a two-prong test is inappropriate and contrary to law. Toma in fact established neither.

The CCPA in Toma discussed an expansive principle (a “‘technological’ or ‘useful’ arts inquiry”) adopted (and eventually abandoned) by the CCPA during the 1970s for dealing with some types of inventions, particularly computer-related inventions. According to this expansive principle, if a claimed process was in “the technological or useful arts,” the process was directed to statutory subject matter (e.g., regardless of whether it included any “mental steps”). Toma, 575 F.2d at 877-78, 197 U.S.P.Q. (BNA) 852.

Appellants will refer to this principle herein as the Toma “technological or useful arts inquiry.”

The Examiner insists that the discussion in Toma related to this principle established a “‘technological arts’ test” or a “Toma test” requiring that a claimed invention be “in the technological arts” (or, more accurately, the Examiner reads Toma as requiring that any claimed method recite a “computer” or “technology”). [Examiner’s Answer, page 19].

Appellants dispute that Toma established any type of “test,” much less a standard requiring any form of a claim. In fact, the Examiner’s reliance on Toma as establishing any type of grounds for rejection related to whether an invention is “in the technological arts,” or any requirement to recite “technology,” is confounding. The Toma court itself states precisely the opposite conclusion.

The Examiner refers to the CCPA’s discussion in Toma of an examiner’s “theory of rejection” that invoked the “technological arts.” In Toma, the examiner had proposed a new “theory of rejection” that if the intended use of a computer-related invention was in a “liberal art” and the invention did not “enhance the internal operation of the digital computer,” the claimed invention

was not in the “technological” or “useful” arts and was therefore not statutory subject matter. Toma, 575 F.2d at 877, 197 U.S.P.Q. (BNA) 852.

In addressing the examiner’s new “theory of rejection,” the CCPA explicitly stated that the examiner had misapplied earlier case law: “[T]he examiner has taken language from the cited cases and attempted to apply that language in a different context. Musgrave, In re Benson, and McIlroy all involved data processing methods useful in a computer, but not expressly limited to use in a computer.” Toma, 575 F.2d at 878, 197 U.S.P.Q. (BNA) 852.

It must be understood that the “technological or useful arts inquiry” was invoked in the cases cited by Toma court, not to reject claimed processes, but as grounds for allowing them, even though the claims at issue were, as the Toma court found, “not expressly limited to use in a computer.” See, Musgrave; In re Benson, 441 F.2d 682, 58 C.C.P.A. 1134, 169 U.S.P.Q. (BNA) 548 (C.C.P.A. 1971), rev’d sub nom. Gottschalk v. Benson, 409 U.S. 63, 34 L. Ed. 2d 273, 93 S. Ct. 253, 175 U.S.P.Q. (BNA) 673 (1972); In re McIlroy, 442 F.2d 1397, 58 C.C.P.A. 1249, 170 U.S.P.Q. (BNA) 31 (C.C.P.A. 1971).

Thus, neither the Toma court nor the cases cited by that examiner could be held as establishing any standard by which a process must be expressly limited to use in a computer, or to any other “technology” for that matter. Accordingly, whatever relevance the Toma “technological or useful arts inquiry” may have today, that inquiry was never interpreted as a test for “technology” (whatever that may mean).

The Toma court also stated: “The language which the examiner has quoted was written in answer to ‘mental steps’ rejections and was not intended to create a

generalized definition of statutory subject matter. Moreover, it was not intended to form a basis for a new § 101 rejection as the examiner apparently suggests. To the extent that this ‘technological arts’ rejection is before us, independent of the rejection based on Benson, it is also reversed.” Toma, 575 F.2d at 878, 197 U.S.P.Q. (BNA) 852 (emphasis added). The Toma court thus found the examiner’s novel “theory of rejection” based on the “technological arts” to be without any basis in law.

The present Examiner insists, nonetheless, that merely because the Toma opinion named a “‘technological’ or ‘useful’ arts inquiry,” the naming of that “inquiry” must have necessarily established a requirement that a claimed invention be “in the technological arts,” and thereby must have established a new grounds for rejection. [Examiner’s Answer, page 19].

The present Examiner also implies that the only way a method claim can satisfy the “‘technological’ or ‘useful’ arts inquiry” is to claim “a method of operating a machine”: “The court found that the claimed computer implemented process was within the ‘technological art’ because the claimed invention was an operation being performed by a computer within a computer [sic].” [Examiner’s Answer, page 19]. The Examiner refers to this “finding” by the Toma court as indicative of the “‘technological arts’ test” or the “Toma test.” [Examiner’s Answer, page 20].

These interpretations of Toma cannot be sustained in light of the plain statements in that opinion to the contrary. That the “technological or useful arts inquiry” was named, and was properly defined by the court (as indicated by the cited cases) as simply requiring consideration of the whole of the claimed subject

matter, is beyond dispute. Toma, 575 F.2d at 877-78, 197 U.S.P.Q. (BNA) 852; see also, Musgrave, 431 F.2d at 893, 167 U.S.P.Q. (BNA) 280.

That the inquiry was deemed irrelevant by the court to the claims at issue in Toma is also beyond dispute. That the court found the examiner had misappropriated the language of the inquiry by fabricating a “theory of rejection” based on a purportedly patentable distinction related to the “technological” versus the “liberal” arts is also beyond dispute. The court dismissed the notion that any legal basis for the “theory of rejection” existed.

Further, the Toma court indicates that the “‘technological’ or ‘useful’ arts inquiry” was only of any particular use or interest in the context of a “mental steps” rejection when the claimed method was merely “useful in a computer, but not expressly limited to use in a computer,” and had only ever been applied in order to overcome such a rejection. In fact, contrary to the novel approach the Examiner has adopted here, there was never any use of the “technological or useful arts inquiry” by the CCPA, before or after Toma, to reject any claim under Section 101.

As indicated by the Examiner, the court stated: “The ‘technological’ or ‘useful’ arts inquiry must focus on whether the claimed subject matter (a method of operating a machine to translate) is statutory,” not on whether the product of the claimed subject matter is statutory, not on whether the prior art which the claimed subject matter purports to replace is statutory, and not on whether the claimed subject matter is presently perceived to be an improvement over the prior art. Toma, 575 F.2d at 877-78, 197 U.S.P.Q. (BNA) 852.



Despite the Examiner's reliance on this quote as establishing a "technological arts' analysis," this brief comment in fact serves only as a reminder that it is the claimed subject matter alone that should be considered (as a whole) when a claim is reviewed for compliance with Section 101: "This was the law prior to Benson and was not changed by Benson." Toma, 575 F.2d at 878, 197 U.S.P.Q. (BNA) 852. The Toma court affirms that Benson did not change the law for two reasons: (i) because, as stated above, the only ground of rejection articulated by the Board was that the Benson holding rendered the claimed method unpatentable, and (ii) because the Examiner had relied upon Benson in creating the new and legally baseless "theory of rejection" premised on the "technological arts."

In fact, the comment highlighted by the present Examiner merely echoes an earlier statement in the Toma opinion: "Even if the only novel aspect of this invention were an algorithm, it is not proper to decide the question of statutory subject matter by focusing on less than all of the claimed invention." Toma, 575 F.2d at 876, 197 U.S.P.Q. (BNA) 852 (citing In re Chatfield, 545 F.2d 152, 191 U.S.P.Q. (BNA) 730 (C.C.P.A. 1976), cert. denied, 434 U.S. 875, 54 L. Ed. 2d 155, 98 S. Ct. 226, 195 U.S.P.Q. (BNA) 465 (1977)). Therefore, the Toma court's reference to a "technological or useful arts inquiry" was merely an alternative way of characterizing "the question of statutory subject matter." It did not suggest or define an additional "technology" requirement or establish any "two prong" test.

Nothing in such a characterization, and nothing in the court's brief comment, however, even remotely suggests that "technology" or a "computer"

must be recited in a method claim, as asserted by the Examiner. In other words, whatever the Toma court meant by the “technological or useful arts inquiry,” there is no basis for the Examiner’s novel interpretation that Toma requires “technology” or a computer be recited in a method claim.

The Examiner must concede that the discussion in Toma with respect to the Toma “technological or useful arts inquiry” and the novel “theory of rejection” does not provide a legal basis for any grounds for rejection predicated upon a need for a claimed invention to be “in the technological arts,” nor does it even hint at a legal basis for the Examiner’s “technology” requirement.

The Examiner insists, however, that a “technology” requirement must be viable today merely because, as discussed below, the Examiner believes that claims deemed statutory subject matter in several recent Federal Circuit decisions would have satisfied such a standard had it actually been applied (the Examiner concedes, as discussed above, that there is no evidence that such a standard was applied). Certainly, this theorizing by the Examiner as to purported standards silently considered and silently found satisfied is no evidence whatsoever that the Toma “technological or useful arts inquiry” has survived, much less that it survives as a statutory requirement distinct and separate from the Federal Circuit’s ultimate “practical application” standard.

Finally, it must be stated that the Toma “technological or useful arts inquiry” has nothing to do with the Examiner’s “technology” requirement as it has been applied to the rejected claims. The Examiner’s “technology” requirement is clearly a novel requirement that a claim must explicitly prohibit performance in the mind of a user. [Examiner’s Answer, pages 17, 23].

In fact, as applied herein, the Examiner's "technology" requirement is nothing more than the "physical limitations" analysis that was the hallmark of the now-discredited Freeman-Walter-Abele test. The Examiner concedes that the Freeman-Walter-Abele test is discredited (see Examiner's Answer, page 20), but improperly requires adherence to it through the guise of the Examiner's "technology" requirement.

The only thing that the Examiner's "technology" requirement has in common with the discussion in Toma is the Examiner's adoption of the "technological arts" parlance in describing his novel approach to determining statutory subject matter. In summary, without regard for the dramatic changes in law that have characterized the remarkable evolution of Section 101 jurisprudence between Toma and AT & T, the Examiner has seized on a "technological arts" rubric abandoned more than twenty years ago, and from it hypothesized a requirement that, under current law, all claims must somehow recite "technology."

The "technological or useful arts inquiry" expressed in Toma could not and "it was not intended to form a basis for a new § 101 rejection as the examiner apparently suggests." Toma, 575 F.2d at 878, 197 U.S.P.Q. (BNA) 852. If it could not form a basis for a new § 101 rejection nor be used to create a generalized definition of statutory subject matter then, it certainly cannot be relied upon as the basis for a new § 101 rejection now.

### **2.3.14. No Two-Prong Test Was Established in Toma**

There is also no evidence that Toma established any two-prong test by merely invoking the “technological or useful arts inquiry” in light of the proposed “theory of rejection.” The Toma court noted that the examiner’s new “theory of rejection” had barely even been acknowledged by the Patent and Trademark Office (PTO) Board of Appeals (the Board). Toma, 575 F.2d at 877, 197 U.S.P.Q. (BNA) 852 (“The board’s perfunctory treatment of this theory of rejection did not indicate approval or disapproval of it.”). In fact, the Board’s opinions made no mention of the substance, much less any analysis of the examiner’s ill-fated “theory of rejection,” other than to note that Toma (prudently) had responded to it in his appeal brief. See, Opinion I of the Board of Appeals, April 29, 1976, p. 188. The Board’s Opinion II reiterated that the Board believed that the Supreme Court’s holding in Gottschalk v. Benson, 409 U.S. 63, 175 U.S.P.Q 673 applied to the Toma application—no mention was made of the examiner’s “theory of rejection.” Opinion II of the Board of Appeals, December 13, 1967, pp. 212-14.

Thus, as noted by the Toma court: “The single ground of rejection articulated by the board is that the Benson holding renders the method unpatentable.” Toma, 575 F.2d at 877, 197 U.S.P.Q. (BNA) 852 (emphasis added).

In addition, the brief submitted by the Commissioner for the Patent and Trademark Office to the CCPA in Toma admitted that whether an invention was within the technological arts “is immaterial.” The only real question at issue is whether appellant’s claims are directed to statutory subject matter.” Brief for the

Commissioner of Patents and Trademarks, Patent Appeal No. 77-554, In the Matter of the Application of Peter P. Toma, pages 19-20 (emphasis added). Accordingly, the PTO itself dropped the examiner's "theory of rejection" (i.e., whether the invention is related to the "liberal" or "technological arts") as an issue before the CCPA. The PTO, in the very case that the present Examiner relies upon as establishing a "two-prong test" including a "technological arts" requirement, acknowledged that whether an invention is "within the technological arts" (whatever that may mean) is irrelevant to determining whether a claim is directed to statutory subject matter.

Given the PTO's disavowal of any need for a "technological arts" inquiry, it is not surprising that the CCPA was somewhat cavalier about whether the new "theory of rejection" was even an issue in dispute that needed to be adjudicated: "The examiner...appears to have rejected the claims because a computerized method of translating is not, the examiner submitted, in the 'technological arts'"; "To the extent that this 'technological arts' rejection is before us, independent of the rejection based on Benson, it is also reversed." Toma, 575 F.2d at 877, 878, 197 U.S.P.Q. (BNA) 852 (emphasis added).

Clearly, therefore, with respect to a "theory of rejection" explicitly abandoned by the PTO as being irrelevant, and without any actual issue in dispute, the discussion in Toma regarding the "technological or useful arts inquiry" cannot support any assertion by the Examiner that Toma thereby established a "two prong" test for determining statutory subject matter. See, e.g., 20 Am. Jur. 2d COURTS § 153 ("Decision on legal point": "For a case to be stare decisis on a particular point of law, that issue must have been raised in the

action decided by the court, and its decision made part of the opinion of the case; accordingly, a case is not binding precedent on a point of law where the holding is only implicit or assumed in the decision but is not announced.”) (emphasis added); 20 Am. Jur. 2d COURTS § 157 (“Lack of argument on point”: “The stare decisis effect of a case is substantially diminished by the fact that the legal point involved in it was decided without argument, or with only little argument.”); 20 Am. Jur. 2d COURTS § 158 (“[t]he stare decisis effect of a case is strong where numerous precedents stand for the same principle of law. Although a rule of law announced or applied only in a single precedent falls within the scope of the policy of stare decisis, its stare decisis effect is weaker.”).

**2.3.15.      The U.S. Constitution does not Require that a  
Granted Patent Promote the “Technological Arts”**

The U.S. Constitution Article I, § 8, clause 8, states: “Congress shall have Power...To promote the Progress of Science and the useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries” (hereinafter the Patent Clause).

According to the Examiner, from the Patent Clause follows “a fundamental premise...that a patent is a statutorily created vehicle for Congress to confer an exclusive right to the inventors for ‘inventions’ that promote the progress of ‘science and the useful arts’.” [Examiner’s Answer, page 18].

The Examiner’s “fundamental premise” is incorrect. The Patent Clause generally authorizes Congress to secure an exclusive right to the discoveries of

inventors—the clause itself does not dictate that any particular discovery must “promote the progress of...the useful arts.”

In fact, according to the Supreme Court: “As we read the Framers instruction, [Art I, sec. 8, cl. 8] empowers Congress to determine the intellectual property regimes that, overall, in that body’s judgment, will serve the ends of the Clause. See Graham, 383 U. S., at 6 (Congress may ‘implement the stated purpose of the Framers by selecting the policy which *in its judgment* best effectuates the constitutional aim.’ (emphasis added)).” Eldred v. Ashcroft, 537 U.S. 186, 222, 154 L. Ed. 2d 683, 713, 123 S. Ct. 769, 790, 65 U.S.P.Q.2d (BNA) 1225 (2003).

The Constitution thus authorizes Congress to establish a patent system to meet the purpose of the Patent Clause. It does not dictate that any right (e.g., a patent) secured under that patent system must be to a discovery that itself promotes the progress of the “useful arts” (whatever they may be), much less the “technological arts” (whatever they may be).

To the extent that the Examiner is complaining that Section 101 would allow grant of a patent without such a “technology” requirement, or for some types of subject matter that the Examiner believes is bad policy, the Examiner has no authority to second-guess the wisdom of Congress. See, e.g., Eldred, 537 U.S. at 222, 154 L. Ed. 2d at 713, 123 S. Ct. at 790, 65 U.S.P.Q.2d (BNA) 1225.

Nor, of course, may such a complaint form a basis for rejection under Section 101.

The court in In re Foster, 438 F.2d 1011, 1014-15, 58 C.C.P.A. 1001, 1004, 169 U.S.P.Q. (BNA) 99 (C.C.P.A. 1971), stated: “All that is necessary, in our

view, to make a sequence of operational steps a statutory ‘process’ within 35 U.S.C. 101 is that it be in the technological arts so as to be in consonance with the Constitutional purpose to promote the progress of ‘useful arts’” (quoting Musgrave, 431 F.2d at 893, 167 U.S.P.Q. (BNA) 280 (citing the Patent Clause)).

Even to the extent that Musgrave and Foster referred to the Patent Clause in defining a statutory process, one would go too far in interpreting either case as requiring that a claimed invention recite any “technology” per the Constitution. To the contrary, Judge Baldwin felt the CCPA had adopted too expansive a principle in Musgrave: “No limitations are placed upon this holding.... “[T]he majority now says, in effect, that one no longer need disclose apparatus for carrying out his process.” Musgrave, 431 F.2d at 894, 167 U.S.P.Q. (BNA) 280 (Baldwin, J., concurring). Judge Baldwin was also concerned that the principle articulated in Musgrave was so liberal as find statutory “a process performable both within and without the technological arts.” Musgrave, 431 F.2d at 896, 167 U.S.P.Q. (BNA) 280.

Further, the CCPA in Toma, the case relied upon by the Examiner as establishing the Examiner’s “technology” requirement, recognized that the claimed invention in Musgrave was for a “data processing method useful in a computer, but not expressly limited to use in a computer.” Toma, 575 F.2d at 878, 197 U.S.P.Q. (BNA) 852. Accordingly, contrary to the Examiner’s assertion, none of the Patent Clause, Musgrave, Foster, or Toma, would require as a “fundamental premise” that a claim be expressly limited to any particular technology.



**2.3.16. The Examiner has failed to rebut Appellants’ argument that whether one or more steps of the claimed invention “can be performed mentally without interaction of a physical structure” is irrelevant to a determination of statutory subject matter under Section 101**

The Examiner has consistently maintained a general requirement that a claim must not cover an embodiment that can be performed mentally (“without interaction of a physical structure”). [Examiner’s Answer, page 17]. The Examiner has never responded to Appellants’ evidence that this test is not a requirement, and more importantly is not a substitute for the proper legal inquiry under Section 101. [Appeal Brief, pages 33-35].

In fact, in Musgrave, one of the cases relied upon by the Examiner as equating “technological arts” with the “useful arts,” the CCPA held that the mere fact that some or all of the steps of a method “may be carried out in or with the aid of the human mind” does not render a sequence of operational steps non-statutory under 35 U.S.C. §101. Musgrave, 431 F.2d at 893, 167 U.S.P.Q. (BNA) 280.

Thus, the court in Musgrave rejected the Examiner’s reasoning that the claims at issue were non-statutory under 35 U.S.C. §101 because they “include no physical steps but set forth merely a method for processing data which does not require any tangible device or apparatus to carry out the method and hence could be carried out mentally.” Musgrave, 431 F.2d at 886, 167 U.S.P.Q. (BNA) 280.

As discussed in the Appeal Brief at pages 33-34, the Examiner’s belief that a claim cannot be “performed mentally” is simply incorrect. The Court of

Appeals for the Federal Circuit has clearly spoken on this issue. Contrary to the Examiner's assertion, a claimed process may read on a mentally performed embodiment. See, Alco Standard Corp. v. Tennessee Valley Authority; Diehr; In re Musgrave.

As discussed in the Appeal Brief at pages 34-35, it is a misunderstanding of Federal Circuit case law to contend that process claims lacking physical limitations (e.g., "physical structure") are not patentable subject matter. See, AT & T.

## **2.4. GROUP II: Claims 4-6**

The proper legal standard for statutory subject matter still has not been applied to any of the claims of GROUP II (or any dependent claim).

### **2.4.1. Per se rejection of dependent claims is improper**

With respect to Claims 4-6, the Examiner now asserts: “Claims 4-6 depend on claim 3. Accordingly, reasoning for Claim Rejections under 35 USC § 101 applied to claim 3 are equally applicable to claims 4-6.” [Examiner’s Answer, page 27].

Thus, the Examiner maintains his position that a *per se* § 101 rejection of a dependent claim is proper. The Examiner has not even acknowledged Appellants’ arguments that the subject matter of each claim must be addressed individually for compliance with Section 101. Appeal Brief, pages 67-69.

Simply, the independent or dependent status of a claim has nothing to do with whether it is directed to statutory subject matter under § 101. The only issue is the scope of what is claimed. According to the Examiner’s rationale, a “limitation in the technological arts,” if added to a non-statutory independent claim, would render that independent claim statutory. However, according to the Examiner’s *per se* standard for rejecting dependent claims, if that same “limitation in the technological arts” were recited in a claim that depended from the non-statutory independent claim, the dependent claim would not be statutory, even though it must be conceded that the dependent claim could be re-written in independent form without changing its scope. Presumably, the re-written claim

would then be statutory. Thus, the Examiner's *per se* standard improperly focuses on form (i.e., status of a claim) rather than substance (i.e., the claimed subject matter). No *prima facie* case has been made that any claim of GROUP II is directed to non-statutory subject matter.

**2.4.2. The Examiner has not properly examined the claims of  
GROUP II**

Further, the Examiner continues to ignore that Claim 4 recites *receiving the signal from a device that monitors at least an indicator of whether the first container and the second container are positioned so as to wirelessly communicate*. The Examiner has never construed this limitation nor provided any rationale why such a limitation is not at all related to what the Examiner calls "technology."

## **2.5. GROUP III: Claims 12-14**

As discussed above with respect to GROUP II, the Examiner has never examined any dependent claim for compliance with Section 101. Instead, the Examiner insists that any dependent claim is non-statutory *per se* merely because its independent claim is non-statutory (which Appellants dispute). [Examiner's Answer, page 28].

Accordingly, the Examiner has failed to establish a *prima facie* case that any claim of GROUP III is non-statutory.

## **2.6. GROUP IV: Claims 34 and 35**

As discussed above with respect to GROUP I, the Examiner has newly provided a “two-prong test” that imposes a novel “technology” requirement. See Sections 2.3.2 – 2.3.3.

The arguments made above with respect to GROUP I and the impropriety of the Examiner’s “two-prong test,” the impropriety of a “technology” requirement, and the asserted legal basis for such standards, are equally applicable to the claims of GROUP IV. See Sections 2.3.6 – 2.3.16.

### **2.6.1. Appellants’ Understanding of Why the Claims Fail the Examiner’s New Two-Prong Test: No “technology”**

It is Appellants’ understanding that the Examiner bases the rejection of all of the pending claims solely on the asserted failure of the claimed invention to satisfy the first requirement (the “technology” requirement) of the Examiner’s proposed “two-prong test.” The Examiner asserts, for example, that Claims **34 and 35** “are completely silent with respect to technology,” process steps “are employed completely without the use of any technology whatsoever,” and the “claims are completely devoid of any means to carry out a process implementing” the recited steps. [Examiner’s Answer, pages 29-30].

Appellants understand that the rejection of the claims for failure to satisfy this first “prong” of the proposed “two-prong test” is now based on one or more of the following findings by the Examiner:

- independent Claim 34 does not recite “a limitation in the technological arts” [Examiner’s Answer, page 29];
- independent Claim 34 “can be performed mentally without interaction of a physical structure” [Examiner’s Answer, page 29];
- independent Claim 34 is “**completely silent with regard to technology**” and is “**process steps that are employed completely without the use of any technology whatsoever**” [Examiner’s Answer, page 29 (emphasis in original)];
- independent Claim 34 is “no more than a suggested idea that somebody can be benefited if he/she notices some changes in an environment” [Examiner’s Answer, page 29];
- independent Claim 34 “may be viewed...as nothing more than simply *observing an environment; making a decision about something based on said observation*, and paying somebody based on said decision” [Examiner’s Answer, page 30 (emphasis in original)]; and
- independent Claim 34 does “not even recite ‘providing at least one first and at least one second containers’ step” [Examiner’s Answer, page 29].

The new reasons for the finding of non-statutory subject matter are discussed below.

As the asserted failure of the claims to recite “technology” is the sole basis for the rejection, if that first “prong” of the Examiner’s proposed “two-prong test” imposes a separate requirement without basis in law, or otherwise departs from the requisite legal analysis under Section 101, the rejection is flawed. Appellants

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discuss above with respect to GROUP I the impropriety of the “two-prong test” and the “technology” requirement.

Also, if the Examiner has failed to establish that the claims fail to comply with the Examiner’s novel “technology” requirement, the rejection is flawed.

### **2.6.2. The Claims Meet the Proper Standard for Statutory Subject Matter**

#### **Useful, Concrete and Tangible Result**

As discussed in the Appeal Brief at pages 81-82, the pending claims produce a useful, concrete and tangible result, which Appellants regard as the only requirement under § 101.

The Examiner does not dispute this.

As Appellants and the Examiner apparently agree that each of Claims **34 and 35** produces a useful, concrete and tangible result, and is therefore necessarily limited to a practical application, the rejection of Claims **34 and 35** for lack of statutory subject matter cannot stand.

Specifically, Claims **34 and 35** cannot be directed to merely an idea in the abstract because they are directed to a practical application—i.e., a useful, concrete and tangible result. As the practical application standard has been defined by the Federal Circuit in AT & T and State St. Bank, the claims cannot be directed to a practical application and also be directed to only an abstract idea.

Contrary to relevant case law, however, this is precisely the position taken by the Examiner. The Examiner has never attempted to provide any rationale to



explain this inconsistent and deeply flawed result of the application of the Examiner's "technology" requirement of the "two prong" test.

As the claims cannot be only abstract ideas and do not fall within any of the other two judicially-created exceptions to patentable subject matter, the claims meet the proper standard for statutory subject matter.

**All Claims Clearly Involve Containers for Storing Medicine**

Although not required for purposes of 35 U.S.C. § 101, independent Claim 34 involves at least one first and at least one second containers for storing medicine and determining whether such containers were able to communicate during a pre-determined time period. Such particular physical objects and determinations with respect to the ability of those particular physical objects to communicate are examples of a practical application and further render the claims of GROUP IV statutory.

**All Claims Clearly Relate to Communication of Devices**

Although not required for purposes of 35 U.S.C. § 101, independent Claim 34 explicitly involves determining whether at least two devices (i.e., containers for storing medicine) were able to communicate. This example of a particular practical application of devices that may be configured for communication further renders the present claims statutory.

### **All Claims Also Result in Physical Transformation**

Although not required for purposes of 35 U.S.C. § 101, independent Claim 34 results in some type of physical transformation. Such a physical transformation is one example of a practical application and further renders the present claims statutory.

Contrary to what the Examiner implies (see Examiner's Answer, page 30), it is not required that a claim result in a physical transformation. See, e.g., AT&T, 172 F.3d at 1357, 50 USPQ2d at 1452. See also, Diehr, 450 U.S. at 192 (the "e.g." signal denotes that physical transformation is an example, not an exclusive requirement for satisfying § 101); Arrhythmia, 958 F.2d at 1060, 22 USPQ2d at 1039 (the transformation simply confirmed that Arrhythmia's method claims satisfied § 101 because the method produced a number which had specific meaning - a useful, concrete, tangible result - not a mathematical abstraction).

All the claims of GROUP IV that were rejected as nonstatutory (including independent Claim 34, and dependent claim 35) result in a physical transformation – namely: *receiving information*.

It is impossible to receive anything that can be considered a *information* without implicating the physical transformation of something, such as (i) the air (by creating sound), (ii) a physical thing that produces sound (by creating sound), (iii) a display device (by creating images on the display), (iv) a printer (by creating text on a substrate), or (v) light (by creating a visible indication).

Moreover, since *information* is something that in each claim must be in some way communicated by someone or something to someone or something, the

very act of any communication causes a physical transformation in whatever medium is used to produce the communication.

**2.6.3. The Examiner Imposes an Improper Requirement to Recite “Technology,” “Computer,” or a “Physical Transformation”**

The Examiner’s “technology” requirement is nothing less than a requirement to recite a “computer,” “physical transformation,” or other alleged evidence of “technology.” The requirement is contrary to law and cannot be required to render a claimed process statutory, particularly where that process, like independent Claim 34, is already directed to a practical application—i.e., produces a useful, concrete, and tangible result.

The explicit reciting of “means to carry out a process” (see Examiner’s Answer, page 29) cannot be required to render a claimed process statutory. The reciting of physical limitations may be helpful, but are not necessary to render a claim statutory. AT & T Corp., 172 F.3d at 1359 (“Whatever may be left of the earlier test, if anything, this type of physical limitations analysis seems of little value....”). Even where a claim incorporates a mathematical algorithm, in contrast to focusing on a physical limitations inquiry, the proper inquiry “focuses on whether the mathematical algorithm is applied in a practical manner to produce a useful result.” AT & T Corp., 172 F.3d at 1359-60.

It is a misunderstanding of Federal Circuit case law to contend that process claims lacking physical limitations are not patentable subject matter. “Since the claims at issue in this case are directed to a process in the first instance, a

structural inquiry is unnecessary.” AT & T Corp., 172 F.3d at 1359. Further, it is well settled that one need not claim in a patent every device required to enable the invention to be used. See, e.g., Asyst Technologies, Inc. v. Empak, Inc., 268 F.3d 1364 (Fed. Cir. 2001).

The Examiner’s type of analysis may derive from a prior test for statutory subject matter that has been discredited. AT & T Corp., 172 F.3d at 1359 (“Whatever may be left of the earlier test, if anything, this type of physical limitations analysis seems of little value ...”) This type of physical limitations analysis is of little value in the Section 101 analysis because “the mere fact that a claimed invention involves inputting numbers, calculating numbers, outputting numbers, and storing numbers, in and of itself, would not render it non-statutory subject matter, unless, of course, its operation does not produce a ‘useful, concrete and tangible result.’” AT & T Corp., 172 F.3d at 1359.

Appellants’ understand that the rejection of Claim 34 for failure to satisfy the Examiner’s “technology” requirement are based on the following new findings by the Examiner first made of record in the Examiner’s Answer:

[T]he claims are completely silent with regard to technology and is [sic] purely an abstract idea or process steps [sic] that are employed completely without the use of any technology whatsoever. The claims are no more than a suggested idea that somebody can be benefited if he/she notices some changes in an environment.

[Examiner’s Answer, page 29].

Appellants note that, contrary to the Examiner’s characterization of Claim 34, the entity who is *rewarding the party* is not necessarily the same as *the party*. The Examiner’s characterization implies that the entity receiving the information is also the party being rewarded.

In any case, the Examiner expressly concedes that Claim 34 is rejected for constituting only a “purely abstract idea” or “no more than a suggested idea.” As the claims are admittedly directed to “practical applications,” i.e., they produce useful, concrete and tangible results (which the Examiner has not disputed), the Examiner’s analysis under the Examiner’s “two-prong test” reaches the impossible conclusion, discussed above, that the claims are only disembodied, abstract ideas.

The Examiner also expressly concedes that the Examiner’s Section 101 two-prong test in fact demands that a particular “computer,” “data processing device,” or “use of technology” be expressly recited in a claimed process. The Examiner continues:

The claims are completely devoid of any means to carry out a process implementing the idea of “receiving information...”, “determining a level to which the party complied...”, or “rewarding the party”.

[Examiner’s Answer, page 29]. The Examiner also admits that the Examiner’s novel “technology” requirement would require, in defiance of current case law, that Appellants claim a particular “means to carry out a process,” a “computer,” a “data processing device,” or “technology” for providing a physical transformation of data. [Examiner’s Answer, page 29-30].

As discussed above with respect to GROUP I, there is no requirement that Appellants recite any particular means by which any step may be carried out. Accordingly, there is no requirement that a claim recite any “device,” “computer,” or “technology” by which it may be carried out. Accordingly, the

type of physical limitations analysis required under the Examiner's "technology" requirement must be of little if no value in the Section 101 analysis.

The Examiner further finds that "there does not appear to be any physical transformation of data." [Examiner's Answer, page 30]. As discussed above with respect to GROUP I, there is no requirement that data or a characteristic of an item (or any substance) has to change or be transformed in accordance with a claimed process.

In other words, contrary to the Examiner's assertion, a claim, even if it recites an algorithm, does not require a "computer," "data processing device," "technological" limitation or any other type of physical limitation to be deemed statutory.

**2.6.4. Failure to Recite Steps of "providing a first and a second container" is Not Grounds for Rejection Under Section 101**

The Examiner further now finds: "[T]he claims do not even recite 'providing at least one first and at least one second containers' step." [Examiner's Answer, page 29].

As discussed above with respect to GROUP I, the Examiner thus imposes a novel and legally baseless *per se* requirement that a method claim reciting a step that refers to a "container" must include an additional step of "providing" for the recited "container." The Examiner does not indicate any authority for this *per se* standard, and Appellants are not aware of any requirement in law that a recited

device or “container” must be explicitly “provided for” in order for a claim to be statutory subject matter.

**2.6.5. “making a decision” is Not Grounds for Rejection Under Section 101**

The Examiner further now finds: “As a result, the above-cited limitation may be viewed, for example, as nothing more than simply *observing an environment, and making a decision about something based at least in part of said observation*, and paying somebody based on said decision.” [Examiner’s Answer, page 30].

As discussed above with respect to GROUP I, the Examiner thus appears to be imposing a novel and legally baseless *per se* requirement that “making a decision” renders independent Claim 34 non-statutory *per se*. For the reasons stated above with respect to GROUP I, the Examiner’s new findings provide no basis at all for a rejection under Section 101. Clearly, the fact that a decision or determination is made does not render Claim 34 unpatentable *per se*.

Clearly, “making a decision” and “paying somebody” would be useful, concrete and tangible results. Accordingly, the Examiner’s Section 101 rejection cannot stand for at least these reasons.

Of course, in attempting to support the Section 101 rejection the Examiner improperly characterizes the subject matter of independent Claim 34. Claim 34 explicitly recites *receiving information regarding whether at least one first container for storing a first medicine was able to communicate with at least one*

*second container for storing a second medicine during a pre-determined time period*, not just “observing an environment.” Also, Claim 34 explicitly recites *determining a level to which the party complied with a medicine schedule based on the information*, not just “making a decision.” Further, Claim 34 explicitly recites *rewarding the party based on the level*, and is not restricted to “paying.” To the extent the Examiner is relying upon characterization of the claimed subject matter in rejecting Claim 34, the § 101 rejection cannot stand.

**2.6.6. The Examiner does not even properly apply the novel “two-prong test”—No substantial evidence that information, able to communicate, or containers for storing medicine do not involve or suggest “technology”**

Even if there is an additional “technology” requirement (which Appellants dispute), there is no basis for the Examiner’s conclusion that independent Claim 34 is “completely silent with regard to technology” and contains “absolutely no limitations...that would at least suggest use of technology.” [Examiner’s Answer, page 29].

The Examiner clearly acknowledges that independent Claim 34 recites containers for storing medicine and making a determination as to whether such containers were able to communicate. [Examiner’s Answer, page 29].

The Examiner has not even attempted to reconcile these findings with the assertions that the claims do not “at least suggest use of technology.”

The Examiner also has failed to provide any indication of how the Examiner has construed explicitly recited terms such as *information*,



*communicate*, or *container*. The Examiner has also failed to provide any evidence or rationale that explicitly recited terms such as *information*, *communicate*, or *container* (which have not been construed) are not “limitations within the technological arts.” Thus, the Examiner has failed to even attempt to apply his own novel standard for rejection. Accordingly, the Examiner’s rejection of claims including such subject matter can only be arbitrary.

## **2.7. GROUP VII: Claims 39-42**

As discussed above with respect to GROUP I, the Examiner has newly provided a “two-prong test” that imposes a novel “technology” requirement. See Sections 2.3.2 – 2.3.3.

The arguments made above with respect to GROUP I and the impropriety of the Examiner’s “two-prong test,” the impropriety of a “technology” requirement, and the asserted legal basis for such standards, are equally applicable to the claims of GROUP VII. See Sections 2.3.6 – 2.3.16.

### **2.7.1. Appellants’ Understanding of Why the Claims Fail the Examiner’s New Two-Prong Test: No “technology”**

It is Appellants’ understanding that the Examiner bases the rejection of all of the pending claims solely on the asserted failure of the claimed invention to satisfy the first requirement (the “technology” requirement) of the Examiner’s proposed “two-prong test.” The Examiner asserts, for example, that Claims 39-42 “are completely silent with respect to technology,” process steps “are employed completely without the use of any technology whatsoever,” and the “claims are completely devoid of any means to carry out a process implementing” the recited steps. [Examiner’s Answer, pages 34-35].

Appellants understand that the rejection of the claims for failure to satisfy this first “prong” of the proposed “two-prong test” is now based on one or more of the following findings by the Examiner:

- independent Claim 39 does not recite “a limitation in the technological arts” [Examiner’s Answer, page 34];
- independent Claim 39 “can be performed mentally without interaction of a physical structure” [Examiner’s Answer, page 34];
- independent Claim 39 is “completely silent with regard to technology” and is “process steps that are employed completely without the use of any technology whatsoever” [Examiner’s Answer, pages 34-35];
- independent Claim 39 is “no more than a suggested idea that somebody observes the readings of the device, and comes to a conclusion based on said observation” [Examiner’s Answer, page 35];
- independent Claim 39 “may be viewed...as nothing more than simply *observing an environment; making a decision about something based on said observation*, and paying somebody based on said decision” [Examiner’s Answer, page 30 (emphasis in original)]; and
- independent Claim 39 does “not even recite ‘providing a device for monitoring...’ step” [Examiner’s Answer, page 35].

The new reasons for the finding of non-statutory subject matter are discussed below.

As the asserted failure of the claims to recite “technology” is the sole basis for the rejection, if that first “prong” of the Examiner’s proposed “two-prong test” imposes a separate requirement without basis in law, or otherwise departs from the requisite legal analysis under Section 101, the rejection is flawed. Appellants discuss above with respect to GROUP I the impropriety of the “two-prong test” and the “technology” requirement.

Also, if the Examiner has failed to establish that the claims fail to comply with the Examiner's novel "technology" requirement, the rejection is flawed.

### **2.7.2. The Claims Meet the Proper Standard for Statutory Subject Matter**

#### **Useful, Concrete and Tangible Result**

As discussed in the Appeal Brief at pages 109-113, the pending claims produce a useful, concrete and tangible result, which Appellants regard as the only requirement under § 101.

The Examiner does not dispute this.

As Appellants and the Examiner apparently agree that each of Claims **39-42** produces a useful, concrete and tangible result, and is therefore necessarily limited to a practical application, the rejection of Claims **39-42** for lack of statutory subject matter cannot stand.

Specifically, Claims **39-42** cannot be directed to merely an idea in the abstract because they are directed to a practical application—i.e., a useful, concrete and tangible result. As the practical application standard has been defined by the Federal Circuit in AT & T and State St. Bank, the claims cannot be directed to a practical application and also be directed to only an abstract idea.

Contrary to relevant case law, however, this is precisely the position taken by the Examiner. The Examiner has never attempted to provide any rationale to explain this inconsistent and deeply flawed result of the application of the Examiner's "technology" requirement of the "two prong" test.

As the claims cannot be only abstract ideas and do not fall within any of the other two judicially-created exceptions to patentable subject matter, the claims meet the proper standard for statutory subject matter.

**All Claims Clearly Involve Receiving a Signal from a Device**

Although not required for purposes of 35 U.S.C. § 101, independent Claim 39 explicitly recites *receiving a signal from a device that monitors whether a first container for storing a first medicine was positioned so as to communicate with a second container for storing a second medicine*.

Receiving a signal from a particular device is one example of a practical application and further render the claims of GROUP VII statutory.

**All Claims Clearly Relate to Communication of Devices**

Although not required for purposes of 35 U.S.C. § 101, independent Claim 39 explicitly involves receiving a signal from one device and also references the monitoring of whether two containers were positioned so as to communicate. This example of a particular practical application further renders the present claims statutory.

**2.7.3. The Examiner Imposes an Improper Requirement to  
Recite “Technology,” “Computer,” or a “Physical  
Transformation”**

As discussed above with respect to GROUP I, the Examiner’s “technology” requirement is nothing less than a requirement to recite a “computer,” “physical transformation,” or other alleged evidence of “technology.” The requirement is contrary to law and cannot be required to render a claimed process statutory, particularly where that process, like independent Claim 39, is already directed to a practical application—i.e., produces a useful, concrete, and tangible result.

The arguments made with respect to GROUP I regarding the impropriety of the Examiner’s “technology” requirement are equally applicable to the claims of GROUP VII. It is a misunderstanding of Federal Circuit case law to contend that process claims lacking physical limitations are not patentable subject matter. “Since the claims at issue in this case are directed to a process in the first instance, a structural inquiry is unnecessary.” AT & T Corp., 172 F.3d at 1359. Further, it is well settled that one need not claim in a patent every device required to enable the invention to be used. See, e.g., Asyst Technologies, Inc. v. Empak, Inc., 268 F.3d 1364 (Fed. Cir. 2001).

Appellants’ understand that the rejection of Claim 39 for failure to satisfy the Examiner’s “technology” requirement are based on the following new findings by the Examiner first made of record in the Examiner’s Answer:

[T]he claims are completely silent with regard to technology and is [sic] purely an abstract idea or process steps [sic] that are employed

completely without the use of any technology whatsoever. The claims are no more than a suggested idea that somebody observes the readings of the device, and comes to a conclusion based on said observation.

[Examiner's Answer, page 35].

Appellants note that Examiner concedes that the entity (*e.g.*, somebody or something) receiving the signal receives that signal explicitly *from a device*. As the Examiner has never attempted to define “technology” or construe *device*, it is impossible to determine why receiving a signal from a device may be accomplished “completely without the use of any technology whatsoever.”

In any case, the Examiner expressly concedes that Claim 39 is rejected for constituting only a “purely abstract idea” or “no more than a suggested idea.” As the claims are admittedly directed to “practical applications,” *i.e.*, they produce useful, concrete and tangible results (which the Examiner has not disputed), the Examiner’s analysis under the Examiner’s “two-prong test” reaches the impossible conclusion, discussed above, that the claims are only disembodied, abstract ideas.

The Examiner also expressly concedes that the Examiner’s Section 101 two-prong test in fact demands that a particular “computer,” “data processing device,” or “use of technology” be expressly recited in a claimed process. The Examiner continues:

The claims are completely devoid of any means to carry out a process implementing the idea of “receiving a signal...”  
“determining if at least one party has complied with a schedule.”

[Examiner's Answer, page 35]. The Examiner also admits that the Examiner’s novel “technology” requirement would require, in defiance of current case law,

that Appellants claim a particular “means to carry out a process,” a “computer,” a “data processing device,” or “technology” for providing a physical transformation of data. [Examiner’s Answer, page 34-35].

As discussed above with respect to GROUP I, there is no requirement that Appellants recite any particular means by which any step may be carried out. Accordingly, there is no requirement that a claim recite any “device,” “computer,” or “technology” by which it may be carried out. Accordingly, the type of physical limitations analysis required under the Examiner’s “technology” requirement must be of little if no value in the Section 101 analysis.

The Examiner further finds that “there does not appear to be any physical transformation of data.” [Examiner’s Answer, page 30]. As discussed above with respect to GROUP I, there is no requirement that data or a characteristic of an item (or any substance) has to change or be transformed in accordance with a claimed process.

In other words, contrary to the Examiner’s assertion, a claim, even if it recites an algorithm, does not require a “computer,” “data processing device,” “technological” limitation or any other type of physical limitation to be deemed statutory.

**2.7.4. Failure to Recite Steps of “providing a first and a second container” is Not Grounds for Rejection Under Section 101**

The Examiner further now finds: “[T]he claims do not even recite ‘providing a device for monitoring’ step.” [Examiner’s Answer, page 29].



As discussed above with respect to GROUP I, the Examiner thus imposes a novel and legally baseless *per se* requirement that a method claim reciting a step that refers to a “device for monitoring” must include an additional step of “providing” for the recited “device.” The Examiner does not indicate any authority for this *per se* standard, and Appellants are not aware of any requirement in law that a recited device must be explicitly “provided for” in order for a claim to be statutory subject matter.

**2.7.5. “coming to a conclusion” is Not Grounds for Rejection**  
**Under Section 101**

The Examiner further now finds: “As a result, the above-cited limitation may be viewed, for example, as nothing more than simply *observing an environment; and coming to a conclusion based on said observation.*” [Examiner’s Answer, page 35].

As discussed above with respect to GROUP I, the Examiner thus appears to be imposing a novel and legally baseless *per se* requirement that “making a decision” or “coming to a conclusion” renders independent Claim 39 non-statutory *per se*. For the reasons stated above with respect to GROUP I, the Examiner’s new findings provide no basis at all for a rejection under Section 101. Clearly, the fact that a decision or determination is made does not render Claim 39 unpatentable *per se*.

Of course, in attempting to support the Section 101 rejection the Examiner improperly characterizes the subject matter of independent Claim 39. Claim 39

explicitly recites *receiving a signal from a device that monitors...*, not just “observing an environment.” Also, Claim 39 explicitly recites *determining if at least one party has complied with a schedule for taking the first medicine and the second medicine based at least in part on the received signal*, not just “coming to a conclusion.” To the extent the Examiner is relying upon this over-generalization of the claimed subject matter in rejecting Claims 39-42, the § 101 rejection cannot stand.

**2.7.6. The Examiner does not even properly apply the novel “two-prong test”—No substantial evidence that *signal, device that monitors, positioned so as to communicate, or containers for storing medicine* do not involve or suggest “technology”**

Even if there is an additional “technology” requirement (which Appellants dispute), there is no basis for the Examiner’s conclusion that independent Claim 39 is “completely silent with regard to technology” and contains “absolutely no limitations...that would at least suggest use of technology.” [Examiner’s Answer, page 34-35].

The Examiner clearly acknowledges that independent Claim 39 generally recites a device that monitors and containers for storing medicine that might be positioned so as to communicate. [Examiner’s Answer, page 40].

The Examiner has not even attempted to reconcile these findings with the assertions that the claims do not “at least suggest use of technology.”

The Examiner also has failed to provide any indication of how the Examiner has construed explicitly recited terms such as *signal, device that monitors, positioned so as to communicate, or container*. The Examiner has also failed to provide any evidence or rationale that explicitly recited terms such as *signal, device that monitors, positioned so as to communicate, or container* (which have not been construed) are not “limitations within the technological arts.” Thus, the Examiner has failed to even attempt to apply his own novel standard for rejection. Accordingly, the Examiner’s rejection of claims including such subject matter can only be arbitrary.

## **2.8. GROUP X: Claim 49**

The proper legal standard for statutory subject matter still has not been applied to GROUP X (or any dependent claim).

As discussed above with respect to GROUP II, the Examiner has never examined any dependent claim for compliance with Section 101. Instead, the Examiner insists that any dependent claim is non-statutory *per se* merely because its independent claim is non-statutory (which Appellants dispute). [Examiner's Answer, page 40].

Accordingly, the Examiner has failed to establish a *prima facie* case that any claim of GROUP X is non-statutory.

## **2.9. GROUP XI: Claim 50**

The proper legal standard for statutory subject matter still has not been applied to GROUP XI (or any dependent claim).

As discussed above with respect to GROUP II, the Examiner has never examined any dependent claim for compliance with Section 101. Instead, the Examiner insists that any dependent claim is non-statutory *per se* merely because its independent claim is non-statutory (which Appellants dispute). [Examiner's Answer, page 42].

Accordingly, the Examiner has failed to establish a *prima facie* case that any claim of GROUP XI is non-statutory.

## **2.10. GROUP XII: Claim 51**

As discussed above with respect to GROUP I, the Examiner has newly provided a “two-prong test” that imposes a novel “technology” requirement. See Sections 2.3.2 – 2.3.3.

The arguments made above with respect to GROUP I and the impropriety of the Examiner’s “two-prong test,” the impropriety of a “technology” requirement, and the asserted legal basis for such standards, are equally applicable to the claims of GROUP XII. See Sections 2.3.6 – 2.3.16.

### **2.10.1. Appellants’ Understanding of Why the Claims Fail the Examiner’s New Two-Prong Test: No “technology”**

It is Appellants’ understanding that the Examiner bases the rejection of all of the pending claims solely on the asserted failure of the claimed invention to satisfy the first requirement (the “technology” requirement) of the Examiner’s proposed “two-prong test.” The Examiner asserts, for example, that Claim 51 is “completely silent with respect to technology,” process steps “are employed completely without the use of any technology whatsoever,” and the “claims are completely devoid of any means to carry out a process implementing” the recited steps. [Examiner’s Answer, pages 43].

Appellants understand that the rejection of the claims for failure to satisfy this first “prong” of the proposed “two-prong test” is now based on one or more of the following findings by the Examiner:

- independent Claim 51 does not recite “a limitation in the technological arts” [Examiner’s Answer, page 43];
- independent Claim 51 “can be performed mentally without interaction of a physical structure” [Examiner’s Answer, page 43];
- independent Claim 51 is “completely silent with regard to technology” and is “process steps that are employed completely without the use of any technology whatsoever” [Examiner’s Answer, page 43];
- independent Claim 51 is “no more than a suggested idea that somebody can be benefited if he/she notices some changes in an environment” [Examiner’s Answer, page 43];
- independent Claim 51 “may be viewed...as nothing more than simply *observing an environment*; and paying somebody based on said observation” [Examiner’s Answer, page 44]; and
- independent Claim 51 does “not even recite ‘providing at least one first and at least one second containers’ step” [Examiner’s Answer, page 44].

The new reasons for the finding of non-statutory subject matter are discussed below.

As the asserted failure of the claims to recite “technology” is the sole basis for the rejection, if that first “prong” of the Examiner’s proposed “two-prong test” imposes a separate requirement without basis in law, or otherwise departs from the requisite legal analysis under Section 101, the rejection is flawed. Appellants discuss above with respect to GROUP I the impropriety of the “two-prong test” and the “technology” requirement.

Also, if the Examiner has failed to establish that the claims fail to comply with the Examiner's novel "technology" requirement, the rejection is flawed.

**2.10.2.      The Claims Meet the Proper Standard for Statutory Subject Matter**

**Useful, Concrete and Tangible Result**

As discussed in the Appeal Brief at pages 149-151, the pending claims produce a useful, concrete and tangible result, which Appellants regard as the only requirement under § 101.

The Examiner does not dispute this.

As Appellants and the Examiner apparently agree that Claim **51** produces a useful, concrete and tangible result, and is therefore necessarily limited to a practical application, the rejection of Claim **51** for lack of statutory subject matter cannot stand.

Specifically, Claim **51** cannot be directed to merely an idea in the abstract because they are directed to a practical application—i.e., a useful, concrete and tangible result. As the practical application standard has been defined by the Federal Circuit in AT & T and State St. Bank, the claims cannot be directed to a practical application and also be directed to only an abstract idea.

Contrary to relevant case law, however, this is precisely the position taken by the Examiner. The Examiner has never attempted to provide any rationale to explain this inconsistent and deeply flawed result of the application of the Examiner's "technology" requirement of the "two prong" test.



As the claims cannot be only abstract ideas and do not fall within any of the other two judicially-created exceptions to patentable subject matter, the claims meet the proper standard for statutory subject matter.

**All Claims Clearly Involve Containers for Storing Medicine**

Although not required for purposes of 35 U.S.C. § 101, independent Claim 51 involves at least one first and at least one second containers for storing medicine and information regarding whether such containers were able to communicate during a pre-determined time period. Such particular physical objects and information with respect to the ability of those particular physical objects to communicate are examples of a practical application and further render the claims of GROUP XII statutory.

**All Claims Clearly Relate to Communication of Devices**

Although not required for purposes of 35 U.S.C. § 101, independent Claim 51 explicitly involves information regarding whether at least two devices (i.e., containers for storing medicine) were able to communicate. This example of a particular practical application further renders the present claims statutory.

**All Claims Also Result in Physical Transformation**

Although not required for purposes of 35 U.S.C. § 101, independent Claim 51 results in some type of physical transformation. Such a physical transformation is one example of a practical application and further renders the present claims statutory.

Contrary to what the Examiner implies (see Examiner's Answer, page 30), it is not required that a claim result in a physical transformation. See, e.g., AT&T, 172 F.3d at 1357, 50 USPQ2d at 1452. See also, Diehr, 450 U.S. at 192 (the "e.g." signal denotes that physical transformation is an example, not an exclusive requirement for satisfying § 101); Arrhythmia, 958 F.2d at 1060, 22 USPQ2d at 1039 (the transformation simply confirmed that Arrhythmia's method claims satisfied § 101 because the method produced a number which had specific meaning - a useful, concrete, tangible result - not a mathematical abstraction).

All the claims of GROUP XII that were rejected as nonstatutory (including independent Claim 51, and dependent claim 35) result in a physical transformation – namely: *obtaining information*.

It is impossible to obtain anything that can be considered a *information* without implicating the physical transformation of something, such as (i) the air (by creating sound), (ii) a physical thing that produces sound (by creating sound), (iii) a display device (by creating images on the display), (iv) a printer (by creating text on a substrate), or (v) light (by creating a visible indication).

Moreover, since *information* is something that in each claim must be in some way communicated by someone or something to someone or something, the very act of any communication causes a physical transformation in whatever medium is used to produce the communication.

**2.10.3.      The Examiner Imposes an Improper Requirement to Recite “Technology,” “Computer,” or a “Physical Transformation”**

The Examiner’s “technology” requirement is nothing less than a requirement to recite a “computer,” “physical transformation,” or other alleged evidence of “technology.” The requirement is contrary to law and cannot be required to render a claimed process statutory, particularly where that process, like independent Claim 51, is already directed to a practical application—i.e., produces a useful, concrete, and tangible result.

The explicit reciting of “means to carry out a process” (see Examiner’s Answer, page 43) cannot be required to render a claimed process statutory. The reciting of physical limitations may be helpful, but are not necessary to render a claim statutory. AT & T Corp., 172 F.3d at 1359 (“Whatever may be left of the earlier test, if anything, this type of physical limitations analysis seems of little value....”). Even where a claim incorporates a mathematical algorithm, in contrast to focusing on a physical limitations inquiry, the proper inquiry “focuses on whether the mathematical algorithm is applied in a practical manner to produce a useful result.” AT & T Corp., 172 F.3d at 1359-60.

It is a misunderstanding of Federal Circuit case law to contend that process claims lacking physical limitations are not patentable subject matter. “Since the claims at issue in this case are directed to a process in the first instance, a structural inquiry is unnecessary.” AT & T Corp., 172 F.3d at 1359. Further, it is well settled that one need not claim in a patent every device required to enable the

invention to be used. See, e.g., Asyst Technologies, Inc. v. Empak, Inc., 268 F.3d 1364 (Fed. Cir. 2001).

The Examiner's type of analysis may derive from a prior test for statutory subject matter that has been discredited. AT & T Corp., 172 F.3d at 1359 (“Whatever may be left of the earlier test, if anything, this type of physical limitations analysis seems of little value ...”) This type of physical limitations analysis is of little value in the Section 101 analysis because “the mere fact that a claimed invention involves inputting numbers, calculating numbers, outputting numbers, and storing numbers, in and of itself, would not render it non-statutory subject matter, unless, of course, its operation does not produce a ‘useful, concrete and tangible result.’” AT & T Corp., 172 F.3d at 1359.

Appellants' understand that the rejection of Claim **51** for failure to satisfy the Examiner's “technology” requirement are based on the following new findings by the Examiner first made of record in the Examiner's Answer:

[T]he claims are [sic] completely silent with regard to technology and is purely an abstract idea or process steps that are employed completely without the use of any technology whatsoever. The claims [sic] are no more than a suggested idea that somebody can be benefited if he/she notices some changes in an environment.

[Examiner's Answer, page 43].

Appellants note that, contrary to the Examiner's characterization of Claim **51**, the entity who is *rewarding the party* is not necessarily the same as *the party*. The Examiner's characterization implies that the entity receiving the information is also the party being rewarded.

In any case, the Examiner expressly concedes that Claim **51** is rejected for constituting only a “purely abstract idea” or “no more than a suggested idea.” As

the claims are admittedly directed to “practical applications,” i.e., they produce useful, concrete and tangible results (which the Examiner has not disputed), the Examiner’s analysis under the Examiner’s “two-prong test” reaches the impossible conclusion, discussed above, that the claims are only disembodied, abstract ideas.

The Examiner also expressly concedes that the Examiner’s Section 101 two-prong test in fact demands that a particular “computer,” “data processing device,” or “use of technology” be expressly recited in a claimed process. The Examiner continues:

The claims are completely devoid of any means to carry out a process implementing the idea of “obtaining information...” or “rewarding the party”.

[Examiner’s Answer, page 43]. The Examiner also admits that the Examiner’s novel “technology” requirement would require, in defiance of current case law, that Appellants claim a particular “means to carry out a process,” a “computer,” a “data processing device,” or “technology” for providing a physical transformation of data. [Examiner’s Answer, pages 43-44].

As discussed above with respect to GROUP I, there is no requirement that Appellants recite any particular means by which any step may be carried out. Accordingly, there is no requirement that a claim recite any “device,” “computer,” or “technology” by which it may be carried out. Accordingly, the type of physical limitations analysis required under the Examiner’s “technology” requirement must be of little if no value in the Section 101 analysis.

The Examiner further finds that “there does not appear to be any physical transformation of data.” [Examiner’s Answer, page 44]. As discussed above

with respect to GROUP I, there is no requirement that data or a characteristic of an item (or any substance) has to change or be transformed in accordance with a claimed process.

In other words, contrary to the Examiner's assertion, a claim, even if it recites an algorithm, does not require a "computer," "data processing device," "technological" limitation or any other type of physical limitation to be deemed statutory.

**2.10.4.      Failure to Recite Steps of "providing a first and a second container" is Not Grounds for Rejection Under Section 101**

The Examiner further now finds: "[T]he claims do not even recite 'providing at least one first and at least one second containers' step." [Examiner's Answer, page 44].

As discussed above with respect to GROUP I, the Examiner thus imposes a novel and legally baseless *per se* requirement that a method claim reciting a step that refers to a "container" must include an additional step of "providing" for the recited "container." The Examiner does not indicate any authority for this *per se* standard, and Appellants are not aware of any requirement in law that a recited device or "container" must be explicitly "provided for" in order for a claim to be statutory subject matter.

**2.10.5.      “making a decision” is Not Grounds for Rejection**  
**Under Section 101**

The Examiner further now finds: “As a result, the above-cited limitation may be viewed, for example, as nothing more than simply *observing an environment*; and paying somebody based on said observation.” [Examiner’s Answer, page 44].

The Examiner thus appears to be imposing a novel and legally baseless *per se* requirement that “observing” and / or “paying somebody” renders independent Claim **51** non-statutory *per se*. For the reasons stated above with respect to GROUP I and GROUP IV, the Examiner’s new findings provide no basis at all for a rejection under Section 101. Clearly, the fact that an observation is made or a party is rewarded does not render Claim **51** unpatentable *per se*.

Clearly, “paying somebody” would be a useful, concrete and tangible result. Accordingly, the Examiner’s Section 101 rejection cannot stand for at least this reason, as discussed above.

Of course, in attempting to support the Section 101 rejection the Examiner improperly characterizes the subject matter of independent Claim **51**. Claim **51** explicitly recites *obtaining information regarding whether at least one first container for storing a first medicine was able to communicate with at least one second container for storing a second medicine during a pre-determined time period*, not just “observing an environment.” Further, Claim **51** explicitly recites *rewarding the party based on the information*, and is not restricted to “paying.” To the extent the Examiner is relying upon this characterization of the claimed subject matter in rejecting Claim **51**, the § 101 rejection cannot stand.

**2.10.6.      The Examiner does not even properly apply the novel “two-prong test”—No substantial evidence that information, able to communicate, or containers for storing medicine do not involve or suggest “technology”**

Even if there is an additional “technology” requirement (which Appellants dispute), there is no basis for the Examiner’s conclusion that independent Claim 51 is “completely silent with regard to technology” and contains “absolutely no limitations...that would at least suggest use of technology.” [Examiner’s Answer, page 43].

The Examiner clearly acknowledges that independent Claim 51 recites containers for storing medicine and making a determination as to whether such containers were able to communicate. [Examiner’s Answer, page 43].

The Examiner has not even attempted to reconcile these findings with the assertions that the claims do not “at least suggest use of technology.”

The Examiner also has failed to provide any indication of how the Examiner has construed explicitly recited terms such as *information, able to communicate, or container*. The Examiner has also failed to provide any evidence or rationale that explicitly recited terms such as *information, able to communicate, or container* (which have not been construed) are not “limitations within the technological arts.” Thus, the Examiner has failed to even attempt to apply his own novel standard for rejection. Accordingly, the Examiner’s rejection of claims including such subject matter can only be arbitrary.



### **3. Claim Rejections under § 103**

The Examiner still has failed to provide a *prima facie* case that any claim is obvious under § 103.

#### **3.1. Summary of Appellants' Arguments**

The § 103(a) rejections fail for two primary reasons: the Examiner has not made a *prima facie* case of obviousness, and in any event no reference(s) are of record that could support a showing of obviousness.

The Examiner has also inappropriately relied on mere assertions as to the desirability of providing for various claimed features, unsupported by any evidence of record. Such assertions can only be regarded as the result of impermissible hindsight that is based on the present disclosure.

In addition, in the Examiner's Answer the Examiner now explicitly relies upon what was allegedly "well-known" in rejecting Claim 50 (GROUP XI) without indicating any evidence in support of this general assertion. Such an assertion cannot be substantial evidence and cannot be relied upon to establish a *prima facie* case of obviousness.

#### **3.2. GROUP I: Claims 3 and 7-11**

The Examiner still has not provided a *prima facie* case of obviousness of any claim of GROUP I.

In order to establish that the combination of Reber and Andrews would teach the feature of *determining whether a first container for storing a first*

*medicine was positioned so as to wirelessly communicate with a second container for storing a second medicine based at least in part on the signal*, the Examiner must provide substantial evidence that the asserted combination would provide for each of the following:

- (i) a container for storing a first medicine that is capable of communicating wirelessly with a second container for storing a second medicine; and
- (ii) determining whether a first container for storing medicine was positioned so as to wirelessly communicate with a second container for storing medicine.

The Examiner has failed to do so. Specifically, the references do not teach or suggest a container for storing medicine that is capable of communicating wirelessly with another container for storing medicine, or the desirability of such.

With respect to all of Claims **3-5, 11 and 26**, the Examiner for the first time now asserts that “receiving the signal from a device that monitors whether the first container and the second container are positioned so as to wirelessly communicate” is taught at “column 2, line 66 – column 3, line 8; column 6, lines 23-35” of Reber. [Examiner’s Answer, pages 11, 25].

Previously, the Examiner had asserted that this subject matter was taught at column 2, line 41 through column 6, line 53, which Appellants traversed. [Second Office Action, page 4].

No explanation is given for this new interpretation of Reber.

Confusingly, the Examiner still explicitly contradicts himself: “Reber et al. do not teach that the fist container wirelessly communicates with the second container.” [Examiner’s Answer, page 11; Second Office Action, page 4

(emphasis added)]. “Reber does not specifically teach that said containers wirelessly communicate with each other.” [Examiner’s Answer, page 25].

The Examiner has never explained how Reber can teach a device that monitors whether two containers are positioned so as to be able to wirelessly communicate yet does not teach that two containers can wirelessly communicate. Appellants believe these findings to be mutually exclusive.

Nonetheless, there is nothing in the newly-cited portions of Reber that would suggest Reber even hints at the ability of two containers for storing medicine to communicate wirelessly with one another, much less a device that monitors whether two containers were so positioned.

The Examiner also asserts that Reber teaches containers for storing medicine that are “equipped with a communication circuitry, and is configured to send and receive a ‘signal.’” [Examiner’s Answer, page 25]. Of course, as discussed in the Appeal Brief, this capability of the Reber containers appears to be restricted to communication between a container and a “medical communication apparatus” that does not even suggest a container for storing medicine; the ability of Reber containers to wirelessly communicate is not “inherent.” [pages 53-55].

The Examiner now also asserts that Andrews discloses “determining whether the first container wirelessly communicates with the second container.” Confusingly, the Examiner also still asserts that Andrews teaches “wherein a first portable security device wirelessly communicates with a second portable security device to determine whether or not the second security device is within a selected proximity of the first security device.” [Examiner’s Answer, page 11].

The Examiner does not even attempt to explain how the “portable security devices” of Andrews would suggest a container for storing medicine to one having ordinary skill in the art. The Examiner simply makes an impermissible leap from “security devices” to “containers” without providing any evidence to fill in the gaps.

In fact, since the Examiner has continually failed to make any finding as to the level of ordinary skill in the art, the Examiner has no basis for any such explanation.

For the first time the Examiner now asserts: “The security feature disclosed in Andrews, would benefit a communication system dealing with health-related issues, disclosed in Reber, by indicating that a security violation has occurred if the second container is not within the selected proximity of the first container....” [Examiner’s Answer, pages 11, 26].

The Examiner, however, still has never provided any evidence that security has anything to do with “health-related issues” of Reber (whatever they may be), much less with containers for storing medicine. The Examiner has never indicated any evidence of why the Reber system would be concerned at all with security.

Further, even if the Examiner provided evidence of the need to secure containers for storing medicine, there is no hint in the evidence of record that it would be obvious to modify the containers of Reber themselves to communicate wirelessly with each other in furtherance of that (baseless) motivation.

The Examiner continues to assert the motivation of “increase accuracy of determining compliance of the patients with the prescribed schedule of taking

medicine.” [Examiner’s Answer, page 11]. The Examiner has never responded to Appellants’ argument that this is a mere assertion that the embodiments of GROUP I are advantageous. The Examiner has never indicated that this purported “accuracy” motivation is evidenced in the prior art, much less evidence that “securing” containers would meet this (baseless) motivation.

The Examiner asserts that one of ordinary skill in the art would have considered teachings of the Andrews reference in modifying Reber to provide for all of the features of independent Claim 3 because “both Reber and Andrews relate to a field of wireless communication of data between portable devices....” [Examiner’s Answer, page 26].

Appellants respectfully maintain that Andrews is not analogous art. It is a described object of the Andrews system to provide for the security of an electronic device by signaling that a security violation has occurred when a remote unit is not within a selected proximity of the electronic device. [Column 1, lines 40-47]. The Examiner has not even asserted that the embodiments of GROUP I are related in any way to security, or that security is a problem that Appellants were trying to solve. Accordingly, Andrews is not analogous art.

There is nothing in either Andrews or Reber, in the knowledge generally available to one having ordinary skill in the art, or in the problem to be solved, that would suggest the selection of Andrews to modify the medical communication system of Reber in the manner proposed by the Examiner.

Thus, the Examiner still has never established a motivation for two containers for storing medicine that may be positioned so as to communicate

wirelessly, much less determining whether two such containers were so positioned.

Accordingly, no *prima facie* case of obviousness of any claim of GROUP I has been established.

### 3.3. GROUP II: Claims 4-6

The Examiner still has not provided a *prima facie* case of obviousness of any claim of GROUP II.

As discussed in the Appeal Brief (pages 69-70), there is no suggestion in the cited references of *a device that monitors at least an indicator of whether the first container and the second container are positioned so as to wirelessly communicate*. Neither reference (alone or in combination) suggests such functionality, much less a device for such a purpose.

The Examiner now asserts that Andrews teaches the recited *device*. [Examiner's Answer, page 27]. Confusingly, as noted above, the Examiner also asserts that Reber teaches this same *device*. [Examiner's Answer, pages 11, 25]. Accordingly, the Examiner appears to be confused as to which reference the Examiner is actually relying upon.

Regardless, Appellants do not agree, for at least the reasons stated in the Appeal Brief and with respect to GROUP I herein. Specifically, neither reference teaches any such *device*, and the combination of references (even if a motivation were provided for such a combination, which Appellants dispute) would not suggest containers for storing medicine capable of wirelessly communicating, much less a device for monitoring an indicator of whether such containers were so positioned. Nothing in Andrews even remotely hints that a “security device” could be a container for storing medicine, as interpreted by the Examiner.

### **3.4. GROUP IV: Claims 34 and 35**

The Examiner still has not provided a *prima facie* case of obviousness of any claim of GROUP IV.

As discussed in the Appeal Brief (pages 89-96), the Examiner has not shown that the cited references, alone or in combination, suggest *determining a level to which a party complied with a medicine schedule based on information regarding whether at least one first container for storing a first medicine was able to communicate with at least one second container for storing a second medicine during a pre-determined time period*, much less a motivation to provide for such a feature.

The Examiner now asserts the same motivation for Claims **34 and 35** that is now asserted for GROUP I: “The security feature in Andrews, would benefit a communication system dealing with health-related issues, disclosed in Reber, by indicating that a security violation has occurred if the second container is not within the selected proximity of the first container....” [Examiner’s Answer, page 33]. This motivation is disputed above with respect to GROUP I.

In addition, the Examiner now asserts: “And the motivation to combine Reber in view of Andrews and Brown would be to stimulate patients to comply with health management program, thereby allowing physicians to determine the best way of treatment for the patients more accurately.” [Examiner’s Answer, page 33].

In effect, the Examiner has provided a mere conclusion, without supporting evidence, that improving compliance of a patient with a health management



program could allow a physician to treat the patient more accurately. This is not substantial evidence of a motivation.

Of course, even if this general conclusion were supported by the prior art of record (which it is not), it does not even remotely suggest the particular features of the claims of GROUP IV. The Examiner has never attempted to establish in the record any evidence *determining a level to which a party complied with a medicine schedule based specifically on information regarding whether at least one first container for storing a first medicine was able to communicate with at least one second container for storing a second medicine during a pre-determined time period.*

Instead, the Examiner continues to rely on a general and insufficient assertion: it is desirable to encourage compliance. The Examiner continues to rely on Brown as if it suggested every possible way in which a party's compliance with a medicine schedule could be determined or rewarded; Brown cannot support any such assertion.

There is nothing in any of the references, alone or in combination, that would suggest that compliance with a medicine schedule has anything to do with whether a container for storing medicine was able to communicate with another container, much less rewarding a party based on a level of compliance that is determined in the recited manner. The Examiner has not provided any substantial evidence to the contrary. Instead, the Examiner has made a general statement that the embodiments of GROUP IV are advantageous, and relies impermissibly on hindsight to assert that any means of determining compliance would have been obvious.

### **3.5. GROUP V: Claims 36 and 37**

The Examiner still has not provided a *prima facie* case of obviousness of any claim of GROUP V.

The Examiner directs the new assertions made with respect to GROUP IV to GROUP V as well.

For at least the same reasons discussed above with respect to GROUP IV, the Examiner still has not provided a *prima facie* case of obviousness of any claim of GROUP V.

### **3.6. GROUP VI: Claim 38**

The Examiner still has not provided a *prima facie* case of obviousness of any claim of GROUP VI.

The Examiner directs the new assertions made with respect to GROUP IV to GROUP VI as well.

For at least the same reasons discussed above with respect to GROUP IV, the Examiner still has not provided a *prima facie* case of obviousness of any claim of GROUP VI.

### 3.7. GROUP VII: Claims 39-42

The Examiner still has not provided a *prima facie* case of obviousness of any claim of GROUP VII.

As discussed in the Appeal Brief (pages 115-118), the Examiner has not shown that the cited references, alone or in combination, suggest either:

*a device that monitors whether a first container for storing a first medicine was positioned so as to communicate with a second container for storing a second medicine; or*

*determining if at least one party has complied with a schedule for taking the first medicine and the second medicine based at least in part on a signal received from such a device,*

much less a motivation to provide for any such features.

The Examiner now asserts the same motivation for Claims **39-42** that is now asserted for GROUP I: “The security feature disclosed in Andrews, would benefit a communication system dealing with health-related issues, disclosed in Reber, by indicating that a security violation has occurred if the second container is not within the selected proximity of the first container....” [Examiner’s Answer, page 37]. This motivation is disputed above with respect to GROUP I.

As discussed above with respect to GROUP I and GROUP IV, none of the cited references, alone or in combination, teaches or suggests the recited *device*.

The Examiner also now appears to be relying explicitly upon Reber as teaching *determining if at least one party has complied with a schedule for taking*

*the first medicine and the second medicine based at least in part on a signal received from such a device.* Appellants dispute this.

As discussed above with respect to GROUPs I and IV, Reber does not teach the recited *device*, and therefore cannot teach determining compliance based on a signal received from any such *device*. As also noted above, the Examiner appears to contradict himself as to whether Reber teaches the *device*.

### 3.8. GROUP IX: Claim 48

The Examiner still has not provided a *prima facie* case of obviousness of any claim of GROUP IX.

As discussed in the Appeal Brief (pages 125-130), the Examiner has not shown that the cited references, alone or in combination, suggest *providing the at least one party with a first reward based on a distance between the first container and the second container*, much less a motivation to provide for any such feature.

The Examiner now asserts that Reber and Andrews teach “determining if at least one party has complied with a schedule for taking the first medicine and the second medicine based at least in part on the received signal..., wherein said received signal being indicative of a predetermined distance between the first container and the second container...” [Examiner’s Answer, page 38].

Previously, the Examiner asserted that neither Reber, Andrews, nor Brown disclosed the recited feature. [Second Office Action, page 8]. The Examiner does not provide any explanation for this new interpretation of Reber and Andrews.

There is nothing in either Reber or Andrews that would even remotely support this assertion. Nothing in either reference even hints at determining compliance based on a signal “being indicative of a predetermined distance between the first container and the second container.” There is no indication in either reference that distance between any containers has anything to do with a schedule for taking a medicine, much less determining compliance with such a schedule, much less providing a reward based on compliance determined in the

manner asserted by the Examiner. The Examiner has never indicated any evidence to the contrary. Even if Andrews suggests a signal indicative of a predetermined distance between “security devices,” there is no suggestion in either reference that such a signal, much less a distance, has anything to do with providing a reward (or determining compliance).

The Examiner does not assert that Brown teaches providing a reward based on a distance; Brown does not even remotely suggest any such feature.

The asserted motivation to combine Reber and Andrews is discussed above with respect with GROUP I; those arguments are equally applicable to GROUP IX.

In addition, the Examiner now asserts: “And the motivation to combine Reber in view of Andrews and Brown would be to stimulate patients to comply with health management program, thereby allowing physicians to determine the best way of treatment for the patients more accurately.” [Examiner’s Answer, page 33].

In effect, the Examiner has provided a mere conclusion, without supporting evidence, that improving compliance of a patient with a health management program could allow a physician to treat the patient more accurately. This is not substantial evidence of a motivation, much less evidence of a motivation to provide for rewarding based on a distance, much less evidence of a motivation to provide for rewarding based on a distance between two medicine containers.

Instead, the Examiner continues to rely on a general and insufficient assertion: it is desirable to encourage compliance. The Examiner continues to rely on Brown as if it suggested every possible way in which a party’s

compliance with a medicine schedule could be determined or rewarded; Brown cannot support any such assertion, much less rewarding based on a distance between two medicine containers.

There is nothing in any of the references, alone or in combination, that would suggest providing a reward based on a distance, much less a distance between two medicine containers. The Examiner has not provided any substantial evidence to the contrary. Instead, the Examiner has made a general statement that the embodiments of GROUP IX are advantageous, and relies impermissibly on hindsight to assert that providing a reward based on a distance would have been obvious.



### 3.9. GROUP X: Claim 49

The Examiner still has not provided a *prima facie* case of obviousness of any claim of GROUP X.

As discussed in the Appeal Brief (pages 134-193), the Examiner has not shown that the cited references, alone or in combination, suggest *penalizing the at least one party if the at least one party has not complied with the schedule for taking the first medicine and the second medicine*, much less a motivation to provide for any such feature.

The Examiner now appears to rely on the same assertions (*e.g.*, motivation to combine Reber, Brown, and Andrews) made with respect to independent Claim 39 of GROUP VII. These new assertions are traversed for the same reasons discussed above with respect to GROUP VII.

The Examiner also now asserts: “Daansen was applied to show fining employees if the employees do not comply with Food Code regulations (C. 1, L. 54 – C. 2, L.16).” [Examiner’s Answer, page 41 (emphasis added)].

Previously, the Examiner asserted that Daansen taught “wherein employers may be fined if employees do not comply with Food Code regulations (Abstract; column 1, line 54 through column 2, line 16).” [Second Office Action, page 9 (emphasis added)].

The Examiner does not provide any explanation for this new interpretation of Daansen (*i.e.*, fining employees, not employers). Further, there is no basis for interpreting Daansen as suggesting fining employees. .

Also, as explained by Appellants previously:

There is nothing in either Reber, Brown, Andrews and Daansen that suggests the applicability of Food Code regulations regarding hand washing to taking a prescription medicine, much less the desirability of making an employer liable for an employee's (or any other party's) failure to comply with a medicine schedule.

[Appeal Brief, page 137].

The Examiner still has not provided any evidence that it would have obvious to modify any combination of Reber, Andrews and Brown to provide for the feature of *penalizing the at least one party if the at least one party has not complied with the schedule for taking the first medicine and the second medicine*.

Clearly, Daansen is devoid of any hint or suggestion of complying with a schedule for taking medicine. The description of the Food Code in Daansen does not even remotely suggestion medicine or taking medicine. The Examiner does not assert otherwise.

The Examiner, therefore, must still be relying on Daansen as teaching penalizing any party based on failure to comply with any requirement related to health. The Daansen reference cannot support any such interpretation, and the Examiner has not provided any evidence that one skilled in the art would have interpreted Daansen as suggesting anything other than that failure to comply with the Food Code specifically may result in an employer being penalized.

The Examiner still does not indicate any evidence of record that would suggest to one of ordinary skill that penalizing a party for failure to comply with a medicine schedule is at all relevant to "disciplining patients" to comply with a "health management program." For instance, Daansen is devoid of a hint or suggestion of a medicine schedule, and Reber, Brown, Andrews and Daansen are

devoid of a suggestion of the desirability of penalizing a party for failure to comply with a medicine schedule.

The Examiner's asserted motivation is thus a mere conclusory statement that the Examiner's proposed combinations of Reber, Daansen, Andrews and/or Brown would be advantageous. The Examiner does not provide any reasoned explanation, based on evidence in the record, as to how one having ordinary skill in the art would have been led to provide for the specific features of independent Claim 49. Applicants respectfully submit that the Examiner's proposed modifications of Reber in light of Andrews and/or Brown use impermissible hindsight reconstruction absent some real and specific teaching, suggestion, or motivation for the modifications.

### **3.10. GROUP XI: Claim 50**

The Examiner still has not provided a *prima facie* case of obviousness of any claim of GROUP XI.

As discussed in the Appeal Brief (pages 143-146), the Examiner has not shown that the cited references, alone or in combination, suggest *charging the at least one party for at least a portion of a treatment of an illness, in which the illness results at least in part from the at least one party not complying with the schedule for taking the first medicine and the second medicine*, much less a motivation to provide for any such feature.

The Examiner now appears to rely on the same assertions (*e.g.*, baseless motivation to combine Reber, Brown, and Andrews) made with respect to independent Claim 39 of GROUP VII. These new assertions are traversed for the same reasons discussed above with respect to GROUP VII.

The Examiner also now asserts: “Daansen was applied to show charging employees if the employees do not comply with Food Code regulations (C. 1, L. 54 – C. 2, L.16).” [Examiner’s Answer, page 42 (emphasis added)].

This new assertion is traversed above with respect to GROUP X, and those arguments are equally applicable to GROUP XI. In summary, Daansen does not teach fining or charging employees, and even if it did, it would not suggest charging for at least a portion of a treatment of an illness.

The Examiner also now asserts: “As per *charging...for at least a portion of a treatment of an illness*, it is old and well known to charge patients for medical services rendered.” [Examiner’s Answer, page 42 (emphasis original)].

Thus, the Examiner is explicitly basing the § 103 rejection of GROUP XI on what is allegedly “old and well known.” This cannot be substantial evidence, and thus the Examiner cannot have established a *prima facie* case of obviousness with respect to GROUP XI.

Even if it were “old and well known” to charge for medical services, there is no evidence that any such charging would suggest charging in which the illness results at least in part from the at least one party not complying with the schedule for taking the first medicine and the second medicine. The Examiner does not assert otherwise.

### **3.11. GROUP XII: Claim 51**

The Examiner still has not provided a *prima facie* case of obviousness of any claim of GROUP XII.

The Examiner directs the same new assertions made with respect to GROUP IV and GROUP VI to GROUP XII as well. [Examiner's Answer, pages 45-46].

For at least the same reasons discussed above with respect to GROUP IV, the Examiner still has not provided a *prima facie* case of obviousness of any claim of GROUP XII. Specifically, the Examiner still has not established substantial evidence in the record of a motivation to combine Reber, Andrews and / or Brown.

### **3.12. GROUP XIII: Claim 26**

The Examiner still has not provided a *prima facie* case of obviousness of any claim of GROUP XIII.

The Examiner directs the same new assertions made with respect to GROUP I to GROUP XIII as well. [Examiner's Answer, pages 46-47].

For at least the same reasons discussed above with respect to GROUP I, the Examiner still has not provided a *prima facie* case of obviousness of any claim of GROUP XIII. Specifically, the Examiner still has not established that the asserted combination of Reber and Andrews would suggest the ability of containers for storing medicine to communicate with one another.

### **3.13. GROUP XIV: Claim 27**

The Examiner still has not provided a *prima facie* case of obviousness of any claim of GROUP XIV.

The Examiner directs the same new assertions made with respect to GROUP I to GROUP XIV as well. [Examiner's Answer, pages 47-48].

For at least the same reasons discussed above with respect to GROUP I, the Examiner still has not provided a *prima facie* case of obviousness of any claim of GROUP XIV. Specifically, the Examiner still has not established that the asserted combination of Reber and Andrews would suggest the ability of containers for storing medicine to communicate with one another.



### **3.14. GROUP XV: Claim 28**

The Examiner still has not provided a *prima facie* case of obviousness of any claim of GROUP XV.

The Examiner directs the same new assertions made with respect to GROUP I to GROUP XV as well. [Examiner's Answer, page 48].

For at least the same reasons discussed above with respect to GROUP I, the Examiner still has not provided a *prima facie* case of obviousness of any claim of GROUP XV. Specifically, the Examiner still has not established that the asserted combination of Reber and Andrews would suggest a second container adapted to store a second medicine and to communicate with a first container adapted to store a first medicine.

Further, there is still no suggestion in the cited references of a server adapted to receive the generated data and to *reward at least one party based on the data about whether a container was positioned so as to communicate with another container*.

The Examiner now asserts that Brown has been applied because it shows means wherein “the compliance individual is rewarded...based on the status of said evaluation.” [Examiner's Answer, pages 48-49].

Even if Brown does suggest this, the Examiner is inappropriately relying upon Brown as suggesting any type of reward based on any type of information. Clearly, the scope of Brown cannot support any such interpretation; the Examiner does not even assert that Brown teaches the specific claimed subject matter. Particularly, Brown (or any other reference) does not even remotely suggest

rewarding a party based on data about whether a container was positioned so as to communicate with another container.

The cited references do not teach or suggest rewarding a party based on such information, nor is there any suggestion of the desirability of providing for any such feature. To the extent that the Examiner is still relying upon Brown as teaching any reward based on any type of information, Appellants traverse any such interpretation of Brown, which is unsupported by the record.

### **3.15. GROUP XVI: Claim 29**

The Examiner still has not provided a *prima facie* case of obviousness of any claim of GROUP XVI.

The Examiner directs the same new assertions made with respect to GROUP I to GROUP XVI as well. [Examiner's Answer, page 49].

Claim **29** depends from Claim **28**. Accordingly, the arguments made above with respect to the new assertions made for GROUP XV are equally applicable to GROUP XVI.

Further, there is still no suggestion in the cited references of a server adapted to receive *generated data that is based at least in part on whether the first container is positioned so as to communicate with the second container, to determine a level to which the at least one party has complied with a schedule for taking the first medicine and the second medicine based at least in part on the data received from the compliance monitoring device; and to reward the at least one party based on the level.*

The Examiner repeats the same general assertion about Brown that was included with respect to Claim **28** of GROUP XV. Appellants submit that Brown's general discussion of rewarding and compliance does not even remotely suggest the specific feature of rewarding a party based on a level to which a party complied with a schedule, in which the level is determined based at least in part on data that is based at least in part on whether a first container is positioned so as to communicate with a second container. The Examiner has failed to consider the claimed subject matter as a whole.

## **CONCLUSION**

Thus, the Examiner's rejection of the pending claims is improper at least because the Examiner has not provided a proper legal basis for rejecting any claim. Therefore, Appellants respectfully request that the Examiner's rejections be reversed.

If any issues remain, or if there are any further suggestions for expediting allowance of the present application, please contact Michael Downs using the information provided below.

Appellants hereby request any extension of time that may be required to make this Appeal Brief timely. Please charge any fees that may be required for this paper, or credit any overpayment, to Deposit Account No. 50-0271.

Respectfully submitted,

November 22, 2004

Date

A handwritten signature in black ink, appearing to read "Michael Downs", is written over a horizontal line.

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## **APPENDIX A—In re Toma Papers**

As discussed herein, in the Examiner's Answer the Examiner for the first time has cited In re Toma as (i) establishing a “two-prong test” and (ii) creating a “technology” requirement for statutory subject matter under § 101.

In response to the Examiner's new assertions, the following papers are referred to in this Reply Brief (see Section 2.3.14 above)

- Brief for the Commissioner of Patent and Trademarks for In re Toma ([i-iii], 1-20) (23 pp. (first is blank))
- Opinion I of the Board of Appeals for In re Toma (April 29, 1976) (pp. 186-198) (13 pp.)
- Opinion II of the Board of Appeals for In re Toma (December 13, 1976) (pp. 211-215) (5 pp.)

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BRIEF FOR THE COMMISSIONER OF  
PATENTS AND TRADEMARKS

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UNITED STATES COURT OF CUSTOMS  
AND PATENT APPEALS

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PATENT APPEAL NO. 77-554

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IN THE MATTER OF THE APPLICATION OF  
PETER P. TOMA

METHOD USING A PROGRAMMED  
DIGITAL COMPUTER SYSTEM FOR  
TRANSLATION BETWEEN NATURAL  
LANGUAGES

---

APPEAL FROM THE BOARD OF APPEALS

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STATEMENT OF THE ISSUE

The issue on appeal is whether the Board of Appeals was correct in affirming the examiner's rejection of claims 1, 17, 32, 36, and 51 to 53<sup>1</sup> as being directed to subject matter not patentable as a process within the meaning of 35 U.S.C. 101.

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1. The Commissioner specifically disagrees with appellant's statement of the issue (Br-1)



## STATEMENT OF THE CASE

Except for the listing of which claims (f.n. 1, *supra*) are before the Court for review, the Commissioner generally agrees with appellant's statement of the case (Br-2-15). Concerning claims 2-13, 15, 16, 18-24, 26, 28-31, 33-35, 40, 41, 43-50, and 54-56, 35 U.S.C. 142 unequivocally states that the appellant "shall file in the Patent and Trademark Office his reasons of appeal." Moreover, 35 U.S.C. 144 further states that this Court's "decision shall be confined to the points set forth in the reasons of appeal." Therefore, since appellant's reasons of appeal (R-402) do not mention these claims, they are not before this Court for review.

## ARGUMENT

### 1. Summary of the Argument

Appellant's claims are directed to computer programs of the type proscribed by *Gottschalk v. Benson* (hereafter *Benson*), 409 U.S. 63, 175 USPQ 673 (1972). Appellant's claims are also directed to subject matter analogous to that proscribed in *In re Christensen*, 478 F.2d 1392, 178 USPQ 35 (CCPA 1973). Appellant's various attempts to show that his claims define statutory subject matter are not persuasive.

---

1. con't. since claims 2-13, 15, 16, 18-24, 26, 28-31, 33-35, 40, 41, 43-50, and 54-56 are not included in appellant's reasons of appeal (R-402), and thus the rejection of these claims, which was also sustained by the Board, is apparently not before the Court for review.

2. *Appellant's Claims Are Directed to Computer Programs of the Type Proscribed by Benson.*

First of all, as noted by the Board of Appeals on reconsideration (R-214), in the period since its original decision herein (R-186), this Court has decided *In re Chatfield*, 545 F.2d 152; 191 USPQ 730 (CCPA 1976). While there are distinctions between this appeal and *Chatfield*, no discussion of this decision appears warranted at this time, inasmuch as a petition for writ of certiorari in *Chatfield* was filed on May 9, 1977.

The position of the Office tribunals, as to the applicability of *Benson* to appellant's claims, is set forth by the examiner (R-184) "\* \* \* that *Benson* ruled out the patenting of all computer programs absent considered action by the Congress." This position is derived from the concluding two principal paragraphs of the *Benson* opinion, 175 USPQ at 677, which suggested that advocates for patents on software and computer program inventions should submit an appropriate proposal to Congress. In the interim, there can hardly be any warrant for granting patents on innovations which involve computer programming as the sole novelty. As the Supreme Court said in *Deepsouth Packing Co. Inc. v. Laitram Corp.*, 406 U.S. 518, 532; 173 USPQ 769, 774 (1972):

It follows that we should not expand patent rights by overruling or modifying our prior cases construing the patent statutes, unless the argument for expansion of privilege is based on more than mere inference from *ambiguous* statutory language. We would require a clear and certain signal from Congress before approving the position of a litigant who, as respondent here, argues that the beachhead of privilege is wider and the area of public use narrower, than courts had previously thought. No such signal legitimizes respondent's position in this litigation. (emphasis added).

In similar manner, restraint is called for in this appeal since 35 U.S.C. 101 does not clearly include computer programs as proper statutory subject matter. Moreover, the Supreme Court in *Benson* has provided guidance in this area, and that guidance is clearly against the expansion of patent rights to embrace the privilege which appellant is requesting.

Turning specifically to *Benson*, it is submitted that the subject matter there involved is different from that herein, but only in the nature or type of information translated. *Benson's* program converted numerical information from the binary coded decimal form to pure binary form. Appellant's translation program, converts verbal information from one form (Russian) to another form (English). It is submitted that a conversion of binary coded decimal information to pure binary, in the board sense, is a form of translation, and thus, the basic aim of appellant's claimed invention is quite similar to *Benson's*.

Moreover, the facts in the instant appeal are quite similar to those in *Benson* in many other respects. For instance, the Board has pointed out (R-188) "that appellant's cluster of programs are in effect a rule (or rules), that is, an algorithm (algorithms) designed for the translation of the text from one natural language to another natural language." Moreover, appellant had admitted that the only practical implementation of the claimed invention is in a digital computer (R-200-201). This is borne out by the very title of the invention (R-1), and the Appendices A-Z and AA-NN which have been filed with the Court as an exhibit showing the program listings of the actual embodiment of appellant's claimed invention (Br-4). Also, as noted by the Board (R-188), appellant has apparently admitted that the claimed subject matter of his invention is directed to a program, *per se*.

Taking claim 1 (Br-8) for example, the basic rule or program of appellant's invention may be paraphrased as follows:

1. Entering the source text in main memory,
2. Scanning and comparing each word of the source text with a dictionary,
  - a. The dictionary having been previously stored in the memory,
  - b. Each memory word including memory offset linkages to still another portion of the computer memory where grammar and translations are stored,

3. Analyzing complete sentences of the source text to provide the target text (i.e., obtain syntax),
  - a. This step utilizes the memory offset linkages to obtain the target language translation, and
  - b. This step also reorders the translation into proper target language sequence.

Thus, it is clear that an actual program is being claimed, even in claim 1, which is the broadest claim at issue. Therefore, it is submitted that the Board was correct in holding (R-211), that the claims at issue are "word pictures" of appellant's program.

There are other similarities to *Benson*. For instance, the preamble of claim 1 recites that the method is for the translation between source and target *natural* languages using a programmable digital computer. But what languages are natural to a digital computer? Certainly fundamental algorithmic and procedural languages such as FORTRAN, ALGOL, JOVIAL, and COBOL are natural to a digital computer. Also, time-sharing languages, such as QUIKTRAN, BASIC, and CAL; string and list processing languages such as SNOBOL, COMIT, LISP, SLIP and FORMAC; and simulation languages such as SIMSCRIPT, GPSS, and DYNAMO are all languages which are natural to a digital computer. Therefore, since it is axiomatic that unpatented claims must be given their broadest reasonable interpretation, it is submitted that appellant's claims are so abstract and sweeping as to

cover translations between all known and unknown languages. Moreover, some of these languages may be program languages which are part and parcel of computer programming. Thus, it is submitted that the end use of appellant's invention may be construed as broadly as the Supreme Court did with the subject matter of *Benson*.

Finally, it is clear that appellant's claimed subject matter is not directed to an analog computer, nor is the program one for servicing a computer. Actually, appellant's program uses the computer rather than servicing it. Therefore, none of the exceptions of *Benson* are applicable herein. In view of the above, the following paraphrase of *Benson's* nutshell rationale is thus clearly applicable:

The [computer program] involved here has no substantial practical application except in connection with a digital computer, which means that \*\*\*, [a] patent would wholly pre-empt the [computer program] and in practical effect would be a patent on the algorithm itself.

It should be further noted that this Court, in its latest decision in the programming area, has not stated that claims to a computer program, *per se*, are statutory. See *In re Deutsch*, 553 F.2d 689, 193 USPQ 645 (CCPA 1977) where the Court stated:

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Nothing in the methods claimed by Deutsch preempts a mathematical formula, an algorithm, or any specific computer program. Assuming eventual issue of the claims on appeal, the formulae, algorithms, and programs disclosed in Deutsch's specification would be freely available to all and could be used for any purpose other than the operation of a system of plants or their equivalent, as spelled out in the appealed claims (emphasis added).

In summary, therefore, it is submitted that the proscription of *Benson* should be construed broadly, and the claims here on appeal fall within that proscription.

3. *Appellant's Claims Are Also Directed to Subject Matter Analogous to That Proscribed in Christensen*

The position of the Office tribunals in *Christensen* (178 USPQ at 36-37) was as follows:

\* \* \* the prior art teaches all the claimed steps except that drawn to computing the porosity of a formation. The essence of the appellant's invention lies in using data already available to one of ordinary skill in the art to compute the values of a parameter known to be of value in determining the geophysical properties of a formation \* \* \* according to a



novel quadratic equation. Stated otherwise, the appellant's point of departure from the teachings of the prior art lies in applying his new formula to old data to calculate values of a known parameter. While this discovery of the appellant may constitute an important contribution to the art of geophysical prospecting, unless it falls within the four statutory subjects matter of 35 U.S.C. 101 it cannot be protected by the patent laws.

The position of the Office in *Christensen* was affirmed by this Court wherein it was held that:

Appellant here, in his supplemental brief, contends that Benson did not decide the issues of this case. Appellant states that his claims are drawn explicitly to a method of determining subsurface porosity in situ, and that his invention is not a computer program. It is clear that the term, in situ, as used in appellant's application and claims merely means that formation porosity is determined without removing core samples for direct measurement. The actual computation of subsurface porosity is not made in the ground. The measurement of density, compression wave velocity, shear wave velocity and bulk modulus of the subsurface formation, all known steps, merely precede the mathematical computation of formation porosity by solution of appellant's novel equation. The in situ limitation

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in appellant's claims does not render Benson inapplicable. We believe that Benson must influence our decision in the instant case. Appellant's arguments, that Benson does not fully deal with the breadth of §101 and does not suggest what view the Congress should take, do not render inapplicable what the Supreme Court said in the quotation reproduced above (referring to the nutshell rationale of *Benson*).

It is submitted that an analogous situation is present in this appeal. Here, the claims at issue (f.n. 1, *supra*) were rejected by the Board (37 CFR 1.196(b), R-190-197) as being obvious over the publication to Oettinger (R-216) under 35 U.S.C. 103. In addition, the Board sustained (R-189-190 and 212) the rejection of all the claims as being directed to non-statutory subject matter under 35 U.S.C. 101, holding that there is an analogy between this case and *Christensen*. Therefore, it is now necessary to determine whether appellant's claims differ from the prior art disclosure of Oettinger solely by a computer program.

Appellant's claims (R-405-427) are directed to the automatic translation from one language (Russian) into another (English) (R-19). Appellant's basic program is shown by the flow chart of Figure 1 (R-134).

Oettinger<sup>2</sup> is also directed to the step by step procedure necessary for the preparation of a program for automatic translation of Russian to English (R-216) and his program flow chart is shown in Figure 36 (R-365). The two basic flow charts bear a striking resemblance. Appellant employs a sophisticated fourth generation computing system (R-5), whereas Oettinger employs the earlier Univac computer (R-221).

Appellant's fourth generation computing system has virtually unlimited storage capacity in its high speed core memory and its rapid access disk memory (R-6, 8, 14, & 21), whereas the main memory of the Univac device of Oettinger is limited to a capacity of 1000 words<sup>3</sup> (R-220) and works with the relatively slow storage tapes. Thus appellant's computing system has the capacity to greatly enlarge the number of routines attached to each word of his program (R-8). Oettinger's programs cannot be so elegant because of memory limitations (R-344).

It is further noted that appellant's main dictionary is established with paradigmatic<sup>4</sup> set codes (R-26-27 & 38). This same basic concept is employed in the dictionary of Oettinger (R-226, 231-242, 310, 352 and 401).

2. It is interesting to note, that Oettinger's programmed translation is not listed as one of the prior art failures by appellant (R-2-5).

3. Appellant's computing system has a storage capacity of at least  $14000 \times 8 = 112,000$  bits (R-14). The storage capacity of the Univac is  $1000 \times 12 = 12,000$  bits, where there are 12 bits to the word (R-220).

4. Paradigm is defined as " \* \* \* 2a: an example of a conjugation or declension showing a word in all its inflectional forms b: a set of forms peculiar to a verb, noun, pronoun, or adjective \* \* \*." WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY.

Turning now to the remaining features of appellant's program, the following table lists (side by side) the various features, and the sections of Oettinger where correspondence is found:

#### FUNCTIONAL FEATURES

Appellant	Oettinger
1. Automatic parsing (R-6)	1. Oettinger does not specifically use the term parsing, however, it appears clear that his classification of nouns, verbs, adjectives, etc., (R-257-258) is a form of parsing.
2. Syntactic analysis (R-6-7).	2. Oettinger recognizes that syntactic analysis is necessary for effective translation (R-275, 315, 319, & 342).
3. A new part of speech concept which breaks with tradition and organizes the functional classes in the language according to the most suitable form for processing in the computer (R-7).	3. This is exactly what Oettinger alleges for his program (R-253, first par.).

4. Appellant's programs are open ended (R-9), his dictionaries can be updated and errors corrected (R-10, 27, & 43-45).
5. Sentences are repeatedly scanned to eliminate ambiguities (R-10-11).
6. Whole sentences or a plurality of sentences are scanned to resolve intermediate or syntactic ambiguities (R-11).
7. The ability to resolve multiple meanings by use of topical glossaries (R-11-12, & 61).
4. Oettinger's program also discloses these features (R-315, 317, 331, 335, 347-352, 356-363).
5. Oettinger appears to scan texts at least twice by what he refers to as the "panning for gold" and "fishnet" technique (R-326-327, 331-333, & 344; also see R-366).
6. Oettinger recognized the necessity of considering syntax in order to have an effective translation (R-232-233, 237-238, & 319).
7. Although Oettinger does not include topical glossaries as such, he certainly considers the problem and weighs the merits of providing such glossaries versus the simple expedient of merely entering everything in his dictionary. Moreover, he states that a guide as to such usage may be obtained as the result of operating the dictionary (R-331).

8. Appellants' algorithm considers idioms and idiomatic expressions (R-12).
8. Oettinger also recognizes that idioms must be considered (R-272).
9. Appellant provides a limited semantic (L.S.) dictionary to resolve multiple meanings and eliminate semantic problems (R-12-17, & 28-29).
9. Actually, all of Chapter 6 of Oettinger represents a study of the meanings of words, i.e. semantics (R-253-275), and Oettinger makes reference to problems of semantics in his breakdown of how specific characters of a word are entered into his computer (R-66).
10. Appellant's dictionary includes a high frequency/idiom portion and a main dictionary lookup (R-22-27).
10. As noted in item 8, supra, Oettinger does recognize the problems of idioms. Moreover, he does investigate the possibility of considering only the high-frequency words in a dictionary (R-327-331, & 333).
11. Appellant's program resolves parts of speech and homograph ambiguities (R-29-30).
11. Oettinger certainly resolves ambiguities in parts of speech when he classifies his words according to the kinds of ideas denoted and the function performed in sentences such as nouns, verbs, adjectives etc. See item 5, supra, and Chapter 6 (R-253-275).

Moreover, homograph ambiguities are also considered in Oettinger (R-226, 230-231, 232-233, & 376).

- |                                                                                                                                            |                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| 12. Finally, each word in appellant's master stem dictionary have attached codes which identify a word stem and its inflections (R-37-43). | 12. Oettinger's dictionary clearly does consider words and their stems (R-226-252; Fig. 37, R-247; R-317; 339, & 343). |
|--------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|

In addition to the functional features tabulated above, Oettinger also provides a procedural or mechanical correspondence to appellant's program which is tabulated as follows:

#### PROCEDURAL OR MECHANICAL FEATURES

##### Appellant

- |                                                                                                                                                                                                                             |                                                                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. As a first step toward implementing his program, appellant converts the Russian text from the Cyrillic alphabet to the Latin alphabet which is recorded on magnetic tape for insertion into the computer (R-19-20 & 55). | 1. Oettinger transliterates the Cyrillic text in a similar manner and records it on magnetic tape for insertion into the computer (R-366-371, especially 370-371). |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|

- |                                                                                                                     |                                                                                                                                                                            |
|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2. The dictionary lookup is performed and a further magnetic tape output is obtained (R-20).                        | 2. (R-370-374)                                                                                                                                                             |
| 3. The information on the output tape is printed out as English text (R-20).                                        | 3. (R-374; and Figs. 70 & 71, R-377-378).                                                                                                                                  |
| 4. While in the dictionary lookup stage, appellant's words are sorted in ascending alphabetical sequence (R-25-26). | 4. (R-340-342, 362-363, & 373).                                                                                                                                            |
| 5. Finally, appellant employs the concept of nested subroutines to provide a more extensive program (R-7).          | 5. Although Oettinger does not use the term "nested," it appears clear that this concept was explored but discarded since Oettinger's program is experimental (R-322-323). |

In view of the above comparison, one might reasonably ask what are the differences between appellant's programmed system and that of Oettinger? In answer it should be emphasized that Oettinger's system is experimental in nature and employs a machine which is limited in comparison to appellant's fourth generation computing system. As a result, Oettinger produces a "trot" (R-374) which must be edited manually, as indicated by the appendix to Chapter 8 (R-388-400). However, Oettinger indicates that the next step of his experimental system is an



automatic editing (R-386). Oettinger's system is thus distinguished from appellant's which produces a fully automated translation. However, since Oettinger appears to address every point considered in appellant's program, the question again arises, wherein lies the difference? Clearly, the only answer must be in appellant's specific program. Specifically, in terms of claim 1 (Br-8), appellant's point of departure from the teachings of the prior art lies in the translation algorithm which includes the programming of memory offset address linkages for each word of source text, analyzing the source text words a sentence at a time, and using the memory offset address linkages for obtaining the target language translation. Thus the Board of Appeals was correct in finding (R-189-190) a close analogy between this case and *Christensen*. Therefore, just as the Office tribunals held in *Christensen*, *supra*, "[w]hile this discovery of the appellant may constitute an important contribution to the art of [language translation], unless it falls within the four statutory subject matter of 35 U.S.C. 101 it cannot be protected by the patent laws." Here, it is respectfully submitted that appellant's claims, wherein the sole novelty lies in the programming steps for a computer as set forth above, cannot fall within the statutory subject matter of 35 U.S.C. 101.

4. *Appellant's Various Attempts To Show That His Claims Define Statutory Subject Matter Are Not Persuasive.*

Appellant first asserts that his invention is a new use of an old machine and



thus proper statutory subject matter (Br-15-18). Appellant cites *In re Prater*, 56 CCPA 1360, 415 F.2d 1378, 159 USPQ 583 (1968); on rehearing, 56 CCPA 1381, 415 F.2d 1393, 162 USPQ 541 (1969); *In re Knowlton*, 481 F.2d 1357, 178 USPQ 486 (CCPA 1973); *Benson*, *supra*; and *In re Johnson*, 502 F.2d 765, 183 USPQ 173 (CCPA, 1974) in support of his position. Concerning *Prater* and *Knowlton*, it is submitted that both of these decisions turned on a 35 U.S.C. 112 issue, and therefore, are not relevant to an issue under 35 U.S.C. 101. Concerning *Benson*, appellant quotes the portion of the opinion dealing with a program servicing a computer. As pointed out above, appellant's program does not service a computer, it merely uses the computer. Concerning *Johnson*, that decision was reversed by the Supreme Court in *Dann v. Johnson*, 425 U.S. 219, 189 USPQ 257 (1976) under 35 U.S.C. 103. Moreover, the claims at issue in *Johnson* were apparatus claims, and thus, *Johnson* is not pertinent to appellant's process claims. Finally, it is immaterial whether appellant's claims are directed to a new use of an old machine where that use is not, under *Benson*, a process within the meaning of the statute, as fully set forth above.

Appellant next argues that it is improper for the Board to ignore his claimed invention, holding it as being a rule or algorithm (Br-18-21). In answer it is submitted that the Board did not ignore appellant's claimed invention, but specifically addressed the claims in holding that they are not statutory. Moreover, appellant's claims recite the details of his computer program, as pointed out above, and they do

fit into the definition of an algorithm.<sup>5</sup>

Appellant next argues that he discloses a specific end use which was not the case in *Benson* (Br-21-22). In answer, it is submitted that appellant's end use can be construed as broadly as that of *Benson*, as pointed out above.

Appellant further argues that his claimed invention is not merely a different algorithm from that of Oettinger (Br-23-24). To the contrary, it is submitted that the only essential difference between Oettinger and appellant's invention is the claimed computer program, as fully set forth above.

Appellant asserts that his invention is patentable under *In re Chatfield*, *supra* (Br-24-26). However, as pointed out above, the *Chatfield* decision is not final.

Finally, appellant argues that the examiner's rejection on the technological arts is not applicable to his invention (Br-26-28). Whether appellant's invention

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<sup>5</sup> A statement of the steps to be followed in the solution of a problem. *STANDARD DICTIONARY OF COMPUTERS AND INFORMATION PROCESSING*, Martin H. Weik, Hayden Book Co. Inc., New York, 1969.

is within the technological arts or not is immaterial. The only real question at issue is whether appellant's claims are directed to statutory subject matter. For the reasons fully set forth above, it is submitted that they are not.

### CONCLUSION

It is submitted that the decision of the Board of Appeals, sustaining the examiner's rejection of claims 1, 17, 32, 36 and 51-53, is correct and, accordingly, should be affirmed.

Respectfully submitted,

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Of Counsel

July 1977

[180]

THE OPINION OF THE BOARD OF APPEALS  
dated April 29, 1976

Before Bennett and Burns, Examiners-in-Chief, and Craig,  
Acting Examiner-in-Chief.

Burns, Examiner-in-Chief.

This is an appeal from the final rejection of claims 1-13, 15-24, 26, 28-36, 40, 41 and 43-56, constituting all the claims presently in the case.

The disclosure is directed to a method of translating from one natural language to another employing a program for a digital computer.

We reproduce claim 1 as representative:

1. A method for translation between source and target natural languages using a programmable digital computer system, the steps comprising:



- [181] (a) storing in a memory a source text to be translated;
- (b) scanning and comparing the source text words with dictionaries of source language words stored in a memory and for each source text word for which a match is found, storing in a file in a memory each word and in association with each such word, coded information derived from such dictionary for use in translation of such word, the coded information including offset address linkages to stored grammar and target language translations for the word;
- (c) analyzing the source text words in its file of words, sentence by sentence, and responsive to the coded information including the offset address linkages
- (1) obtaining the target language translation of words from memory; and
  - (2) reordering the target language translation into the proper target language sequence.

We cite the following reference for the purposes of 37 CFR 1.196(b):

Oettinger, Automatic Language Translation, Harvard University Press, Cambridge, Massachusetts, 1950, pages 4, 6-13 and 127-302.

While we do not refer specifically to all of the pages cited above in our discussion of this reference, the pages are cited in block in order to provide continuity in understanding the text.

All of the claims have been rejected under 35 USC 101 as being directed to non-statutory subject matter. The examiner has cited Gottschalk v. Benson et al, 409 US 63, 175 USPQ 673. He indicates that the program implemented method involved here has no substantial or practical application except in connection with the general purpose digital computer. He cites several other decisions directed to matters relating to computer programming.



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Appellant, beginning on page 5 of his brief, urges that his process is within the technological arts. He urges that the Supreme Court in Gottschalk v. Benson, supra, did not hold that all computer programs are unpatentable. He draws attention to the particular nature of the claimed subject

[182] matter in Benson and urges that there is a "sharp contrast to the present invention" which it is indicated is for the "actual method or program for operating the computer", brief, page 8, paragraph two. He then proceeds to an analysis of certain of the individual claims to demonstrate the distinction urged. Further, it is argued that In re Prater and Wei, 159 USPQ 580 (CCPA, 1968), decision on rehearing, 162 USPQ 541 (CCPA, 1969), was not in fact overruled by the Supreme Court in the Benson case and that therefore the rejection is improper.

We have given careful consideration to the arguments advanced by appellant in his brief and reply brief in the light of the remarks of the examiner in his answer, however, we find ourselves in agreement with the examiner. We would draw attention to the fact that appellant's cluster of programs are in effect a rule (or rules), that is, an algorithm (algorithms), designed for the translation of text from one natural language to another natural language. The claimed subject matter is admittedly much more complex than the algorithm or algorithms which the Supreme Court had occasion to address in the Benson case. Their language, however, sets no limitations as to the nature, extent or complexity of an algorithm. Appellant on

page 8 of his brief has quoted their language which we will repeat for continuity in our discussion.

"It is conceded that one may not patent an idea. But in practical effect that would be the result if the formula for converting binary code to pure binary were patented in this case. The mathematical formula involved here has no substantial practical application except in connection with a digital computer, which means that if the judgment below is affirmed, the patent would wholly pre-empt the mathematical formula and in practical effect would be a patent on the algorithm itself." (175 USPQ 626).

[183] Notwithstanding appellant's arguments concerning the applicability of *Prater and Wei*, supra, we find ourselves constrained by the *Benson* case and in particular by the language quoted from it above.

We consider *In re Christensen*, 178 USPQ 35, (CCPA, 1973), to be in point in the construction of the *Benson* case. In *Christensen*, the prior art taught all of the claimed method steps to a method of determining the porosity of sub-surface formations in a geophysical prospecting method except the step drawn to computing the porosity of a formation. *Christensen* employed "a novel quadratic equation". The court, at 37, said:

"The issue before us in the instant case is also a narrow one, namely, is a method claim in which the point of novelty is a mathematical equation to be solved as the final step of the method, a statutory method? We follow the Supreme Court in concluding that the answer is in the negative."

We find an analogy here in that the prior art (Oettinger as indicated below) teaches input of natural language text to a computer for translation to another language. Oettinger, within the computer, processes the textual material according to a particular "formula" or algorithm. Output in a different natural language is achieved. Appellant does likewise, that is, inputs text in one language, processes the textual material in accordance with appellant's own processing rules, e.g., formulas or algorithms, and generates an output text in a different natural language. In short, appellant, as did Christensen, has contributed a different algorithm or formula to be used in language translation.

Accordingly, we will sustain this rejection.

[184]

NEW REJECTIONS UNDER 37 CFR 1.196(b)

Claims 1, 51 and 52 are rejected under 35 USC 103. As evidence of obviousness, we proffer Oettinger. While it is recognized that appellant's disclosure appears to be directed to a more sophisticated attack on the problem of language translation than that disclosed in Oettinger, nevertheless, we find claim 1 and other claims treated below to have language of such scope and extent that Oettinger satisfactorily responds.



CLAIM 1

1. A method for translation between source and target natural languages using a programmable digital computer system, the steps comprising:

(a) storing in a memory a source text to be translated;

(b) scanning and comparing the source text words with dictionaries of source language words stored in a memory and for each source text word for which a match is found,

storing in a file in a memory each word and in association with each such word, coded information derived from such dictionary for use in translation of such word, the coded information including offset address linkages to stored grammar and target language translations for the word;

OETTINGER

The overall system for translation is shown on page 266, Figure 63 and is described on pages 265 and 267.

Input tapes shown in Figure 45 on page 233 constitute a memory which stores the source text to be translated. The memory can also be considered as the "file of standardized text" shown in Figure 63, page 266, which is described on pages 265-267.

The scanning and comparing step is described in section 8.3, page 271 and the obtaining of a match is particularly described beginning with the last two lines of this page through page 274, line 1.

Oettinger, page 265, section 8.1, paragraph 1, states: "The basic function of this system is to adjoin to strings occurring in a text the information about these strings that is stored in the dictionary file.---"



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[185] CLAIM 1OETTINGER

The result of the match step is the "alphabetic sub-dictionary" described beginning with the last four lines of page 274, see Figure 69, page 276. It will be noted that the coded information derived from the dictionary store in the memory by this step includes stored grammar, that is, the affixes, and target language translation for the word obtained from the dictionary, which dictionary is formatted in Russian standard five word items and corresponding English.

(c) analyzing the source text words in its file of words, sentence by sentence, and responsive to the coded information including the offset address linkages

Analyzing the source text words is performed in the "next pass" described beginning on page 275, line 6 and is responsive to the coded information relating to affixes and like. Note page 267, lines 6-9, "The boxes---for the next".

(1) obtaining the target language translation of words from memory; and

A target language translation is obtained as shown in Figure 70, page 278, augmented text.

(2) reordering the target language translation into the proper target language sequence.

An editing program serves to reorder the target language translation in a proper target language sequence for visual inspection as shown in Figure 71, page 279, the description for which is in section 8.4, page 2



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With regard to the phrase "offset address linkages" found in (b) of the claim, we note a variety of phrases found in appellant's specification.

Thus:

Page 34,

lines 5 and 6, "record sub-part offset pointers (record offset)"

Page 43,

lines 2 and 3, "disk address pointers and memory offset pointers",

Page 44,

lines 12 and 13, "memory offset (GRAM OFFSET)",

line 19, "GRAMMAR OFFSET",

lines 26 to 28, "ENG. OFFSET" and "address offset linkage"

Page 45,

lines 13 and 14, "memory offset address (IDIOM OFFSET, ---)",

line 17, "memory offset address",

lines 20 and 21, "table byte offset address",

line 24, "byte offset",

Page 46,

lines 20 and 21, "byte offset information",

Page 51,

line 29, "address offset",

Page 52,

lines 10 and 14, "grammar offset" and

line 17, "address linkage",

[187]

Page 59,

lines 18-21 describe the operation of "pointing" as a form of linkage.

We further note references in the diagrams to "byte offset" on page 84, to "grammar offset" and "idiom offset" on page 88, to "English offset" on page 89 and finally on page 90 to "compound group offsets", "byte offset to target meanings", and to "meaning offset address".

It would appear that an analysis of appellant's claim in the light of his specification would admit of the construction of the term "offset address linkages" being related to one or more of the varied codes, references to which have been tabulated above. Within this broad framework of construction of the phrase "offset address linkages", the Oettinger codes for affixes and the like appear to respond to the language of the claim. Should it be considered that some semantic distinction can be drawn between Oettinger's codes and appellant's "linkages", we consider it obvious to provide linkages of the character recited in the claim in lieu of Oettinger's codes in his configuration. Both serve to refine the operation of the dictionary.

Since the "trot" shown in Figure 71, page 279, proceeds from word to word, we consider the programs of Oettinger to analyze the Russian text "sentence by sentence" within the broad but reasonable meaning of that phrase. In this regard, note page 265, paragraph 1.



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Claim 17 is rejected under 35 USC 103 for the reasons applied against its parent claim 1. It is apparent that the Russian sentence during the processing subsequent to matching can be said to have been subjected to the step of "placing source language sentence in a special area, reserved for this purpose, in the computer memory", for example, when it is placed in the file of augmented text as shown in Figure 63, page 266.

Claim 32, dependent from claim 1, is rejected under 35 USC 103 for the reasons applied against claim 1. Note, section 103, page 271, that analysis of each word takes place serially, that is, in sequences of words in the source language. Those words are necessarily "within phrases and clauses" as an inspection of the Russian text of Figure 64, page 268, indicates. Such analysis can be said to be "in relation to the target language sequence" within the broad meaning of this clause, and the understandable translation, as indicated by a reading of the English text in Figure 71, page 279. The target language is expressed symbolically together with assigned numbers and letters (affixes) as indicated by an inspection of the Russian in Figure 70, page 278. Manifestly, the print-out of Figure 71, page 279, is effected by "taking into consideration each source word" since it is the result of the dictionary look-up.

Claim 36 is rejected under 35 USC 103 as being obvious in view of Oettinger. The reference is applied as against



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parent claims 32 and 1. An inspection of Figure 63, page 275, shows the final step of format editing as described on page 275, note, for example, line 6 et seq. The skilled artisan can be expected to make such computer storage arrangements as are necessary for the text prior to final print-out. Whether this storage allocation takes place in any particular portion of the memory will, in large part depend upon the available storage of the particular configuration of computing

[189] equipment employed. This being the case, we think it would be obvious to such a person to effect transfer of the translation when such a memory area is filled to the printer or to temporary storage if available. Needless to say, the sequence of the translated words, as for example in Figures 69 and 71, pages 278, 279, is a result of the "relationships between the source and target languages" and is "set up previously by the numbers given after each word", note page 275, lines 6 through 8.

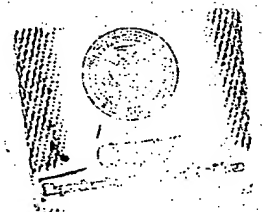
Claim 53 is rejected under 35 USC 103 as being obvious over Oettinger as applied above. Oettinger, page 6, lines 12-15, notes the apparent availability to him of a multiplicity of machines including the IEM 705. The artisan practicing the invention may be expected to make use of whatever hardware is available to him. We think it would occur as an obvious feature to such a person with Oettinger's reference to IEM equipment before him to practice the invention on a Model 360 series, the 65 for example, this series of



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computers having superceded the Model 705 by the time the instant application was filed. It does not appear that appellant has urged criticality of a particular configuration in his discussion of this feature in the brief, page 9, last paragraph. It is axiomatic that computer tasks be matched to computer hardware of adequate size and configuration.

Claim 11 and its dependent claims 12 and 13 are rejected as under 35 USC 112, paragraph two, as being indefinite. The phrase "the low frequency file" lacks antecedent basis in the parent claim 1. It is noted that this phrase occurs for the first time in claim 2. Could it have been intended that claim 11 depend from claim 2?



[190]

Any request for reconsideration or modification of this decision by the Board of Appeals based upon the same record must be filed within thirty days from the date of decision. (37 CFR 1.197). Should appellant elect to have further prosecution before the examiner in response to the new rejection under 37 CFR 1.196(b) by way of amendment or showing of facts or both, not previously of record, a shortened statutory period for making such response as he set to expire thirty days from the date of this decision.

In summary, we have sustained the rejection of claims under 35 USC 101 and we have entered new rejection under 35 USC 103 as to claims 1, 17, 32, 36, 51-53, and under 35 USC 112 as to claims 11-13.

The decision of the examiner is affirmed.

AFFIRMED, 37 CFR 1.196(b)

*R. A. [Signature]*  
Examiner-in-Chief

*Walter [Signature]*  
Examiner-in-Chief

*Harry D. [Signature]*  
Examiner-in-Chief  
(Acting)

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OPINION OF THE BOARD OF APPEALS UPON  
REQUEST FOR RECONSIDERATION dated  
December 13, 1976

UPON REQUEST FOR RECONSIDERATION

In a paper filed November 19, 1976, appellant requests reconsideration of our decision dated April 29, 1976, wherein we sustained the rejection of all claims under 35 USC 103 and entered new rejections under 35 USC 103 as to claims 1, 32, 36, and 51-53, and under 35 USC 112 as to claims 11-13.

The examiner having indicated by official action dated September 17, 1976 that the rejections under 35 USC 112 and 103 have been overcome, so much of our original decision as related to these rejections is no longer effective.

Appellant requests that we reconsider our decision sustaining the rejection under 35 USC 101 of all claims.

Beginning on page 3 of his most recent paper, he presents three bases for reversal. First, he calls attention to the fact that the claimed invention is one for "A method for translation between...natural languages using a programmable digital computer system".

While we recognize that the end result of practicing appellant's invention involves the translation between natural languages, we remain of the opinion that the steps recited in the claims are word pictures of operations taking place within a computer incident to the operation of the computer program.



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For this reason, we find no basis for departing from our original decision based upon the end use characterization quoted above.

Secondly, appellant urges as a distinction that the claimed method is practiced on a "programmable digital computer system" having "a main memory". Except for certain data processing systems in the art wherein the logic or arithmetic unit has itself been characterized as a computer, we would consider it difficult to conceive of a computer system without "a main memory". Certainly, we would consider this true of "programmable digital computer systems" as conventionally understood. We find in appellant's assertion no circumstance which would remove appellant's case from the workings of the statute.

As a third reason (appellant's request, page 4), appellant urges that the claimed method is concerned with the efficient use of a computer system and main memory so as to enable the handling of the large masses of data, large tables, etc., to effect a complete translation to one natural language to another. Our discussion of the analogy to be drawn between appellant's application and the circumstances in In re Christensen, 470 F.2d 1392, 178 USPQ 35, page 4 of our decision, addresses this matter.

We have reviewed the arguments and authorities advanced by appellant beginning on page 4 of his request, item III, but find no basis for departing from our original decision.



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As for appellant's remarks, item IV, beginning on page 6 of his request, we reiterate that although appellant's claimed subject matter may be characterized as a program for translating, it is in addition directed to the carrying out of rules of operation within the computer, e.g. programs, which are subject, we think, to the holding in the instant case.

Beginning on page 7 of his request, line 10, appellant has misconstrued the language of our original decision. Appellant's phrase "their language" as employed by us, original decision, page 3, first full paragraph beginning at line 11, referred to the language of the Supreme Court not the language of the claimed subject matter. This will be apparent from the lines immediately subsequent in our original decision where we refer to "their language", that is, the language of the Supreme Court, a portion of which we reproduced in our original decision on page 3.

At the bottom of page 7 of his request, appellant attempts to draw distinctions between the instant case and the fact situation obtaining in Christensen. Again, the instant hinges upon the word "algorithm". We offer a definition from "Computer Dictionary and Handbook" by Sippl, Sippl, Howard W. Sams and Co., Inc., the Bobbs-Merrill Co., 1972, second edition:



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[206] "algorithm---1. A fixed step-by-step procedure for accomplishing a given result; usually a simplified procedure for solving a complex problem, also a full statement of a finite number of steps. 2. A defined process or set of rules that leads and assures development of a desired output from a given input. A sequence of formulae and/or algebraic/logical steps to calculate or determine a given task; processing rules."

We draw from the above definition the conclusion that whether the rules, which are employed in the data processing for language translation as recited in the claims of appellant, are characterized in mathematical terms or in word configurations, they nevertheless fall within the ambit of the definitions stated for the term "algorithm".

As for the pertinency of *Gottschalk v. Benson*, 409 US 63, 175 USPQ 673, we have carefully considered appellant's most recent remarks beginning at the middle of page 8 of his request. We are mindful of the fact that the end result achieved in Benson, namely, conversion from binary coded decimal to binary, differs from that in appellant's system, namely, translation or conversion from one natural language to another. The language of the Benson decision, however, we remain of the opinion, applies in the instant case.

In our consideration of appellant's request, we have also had the benefit of two recently decided cases in the CCPA, *In re Chatfield* and *In re Noll*, both decided November 18, 1976. We have reviewed the language of Benson in the light of these decisions but remain persuaded that we have construed the language of the Benson case and its holding in a reasonable manner.

In summary, appellant's request for reconsideration is granted to the extent that we have in fact reconsidered our original holding. We have modified our original decision by indicating that, due to the examiner's action, the rejections under 35 USC 103 and 112 are no longer effective. Appellant's request is otherwise denied.

NOTED

*R. A. Bennett*  
Examiner-in-Chief

*Robert D. Burns*  
Examiner-in-Chief

*James D. Craig*  
Examiner-in-Chief  
(Acting)

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